HOOKER'S

ICONES PLANTARUM.

THIRD SERIES.—VOL. VII.

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HOOKER'S

ICONES PLANTARUM;

OR,

FIGURES, WITH DESCRIPTIVE CHARACTERS AND REMARKS, OF NEW AND RARE PLANTS,

SELECTED FROM THE

KEW HERBARIUM.

THIRD SERIES.

EDITED BY

SIR JOSEPH DALTON HOOKER, K.C.S.I., C.B., M.D., F.R.S.

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LATE DIRECTOR OF THE ROYAL BOTANICAL GARDENS, KEW.

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1886–1887.

MISSOURI
BOTANICAL
GARDEN

Plate 1601.

GLEICHENIA MONILIFORMIS, *Moore.*

Filices, Suborder Gleicheniaceæ.

Gleichenia moniliformis, *Moore, Ind. Fil.* p. 11; caudice erecto gracili ramoso, stipitibus elongatis castaneis nudis, frondibus linearibus simpliciter pinnatis rigide coriaceis glabris, pinnis oblongis obtusis contiguis patulis multijugis margine recurvatis, venis immersis flabellatis, soris solitariis ad pinnarum basin anteriorem sitis, sporangiis paucis sessilibus paraphysibus paleaceis copiosis brevissimis intermixtis.—*Hook. et Baker, Syn. Fil.* p. 11.

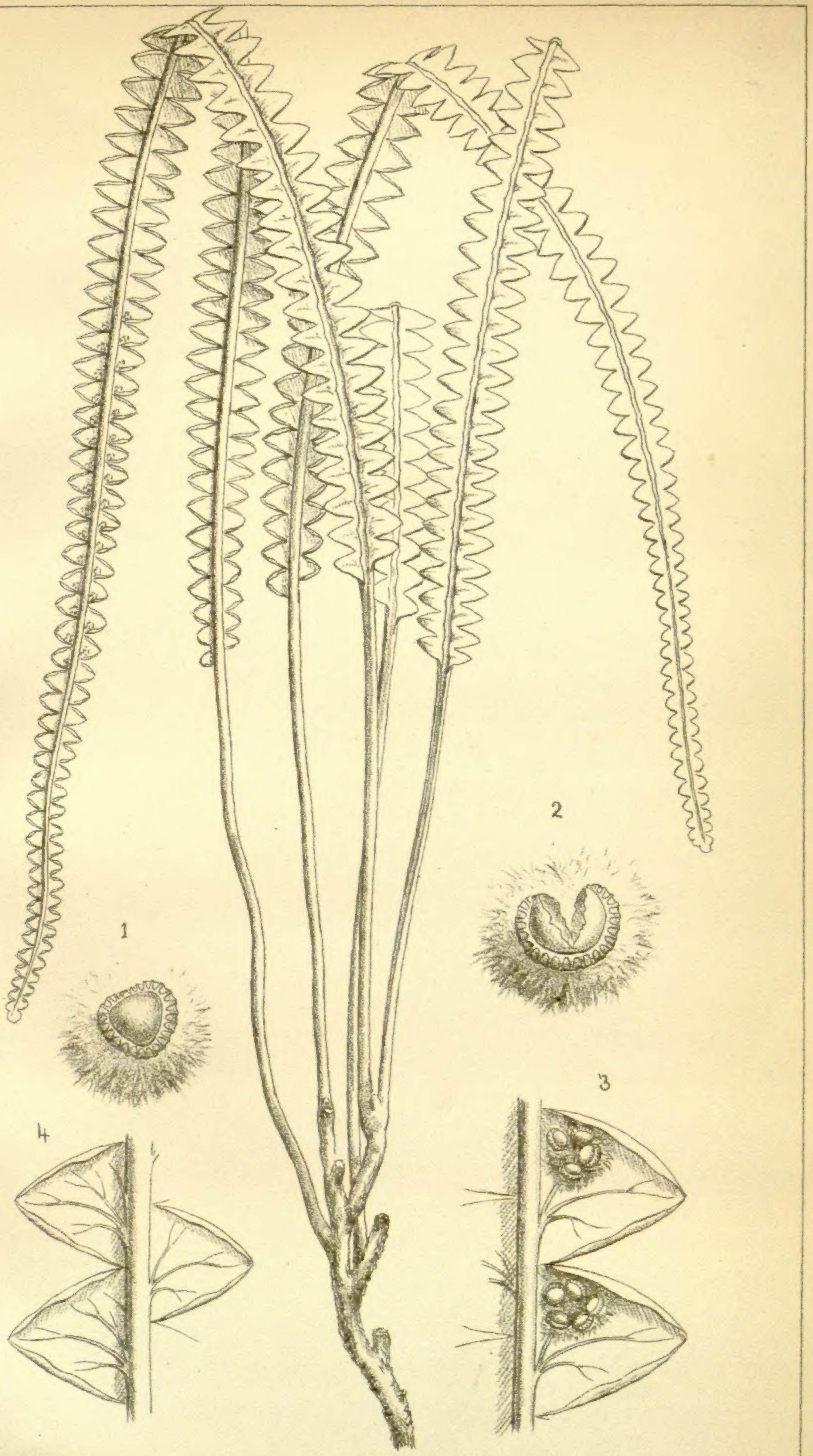
Stromatopteris moniliformis, Metten. in Ann. Sc. Nat. Bot. ser. IV. vol. xv. p. 84, tab. 3; Fourn. Fil. Nov. Caled. p. 268.

Hab. New Caledonia, *Vieillard*, 1571; *Richards*.

Stipites 2–4 poll. longi. *Lamina* pedalis et ultra, 3–4 lin. lata, pinnis interdum 60–80-jugis.

This is one of the most interesting of the endemic ferns of New Caledonia. It is so different from all the other Gleichenias that it has been regarded by Mettenius and Fournier as forming a monotypic genus.—J. G. Baker.

Fig. 1. Sporange in an early stage. 2. Sporange in an advanced stage. 3. Fertile portion of frond. 4. Sterile portion. *All more or less enlarged.*



Gleichenia moniliformis, Moore.

Plate 1602.

GLEICHENIA MILNEI, *Baker.*

Filices, Suborder Gleicheniaceæ.

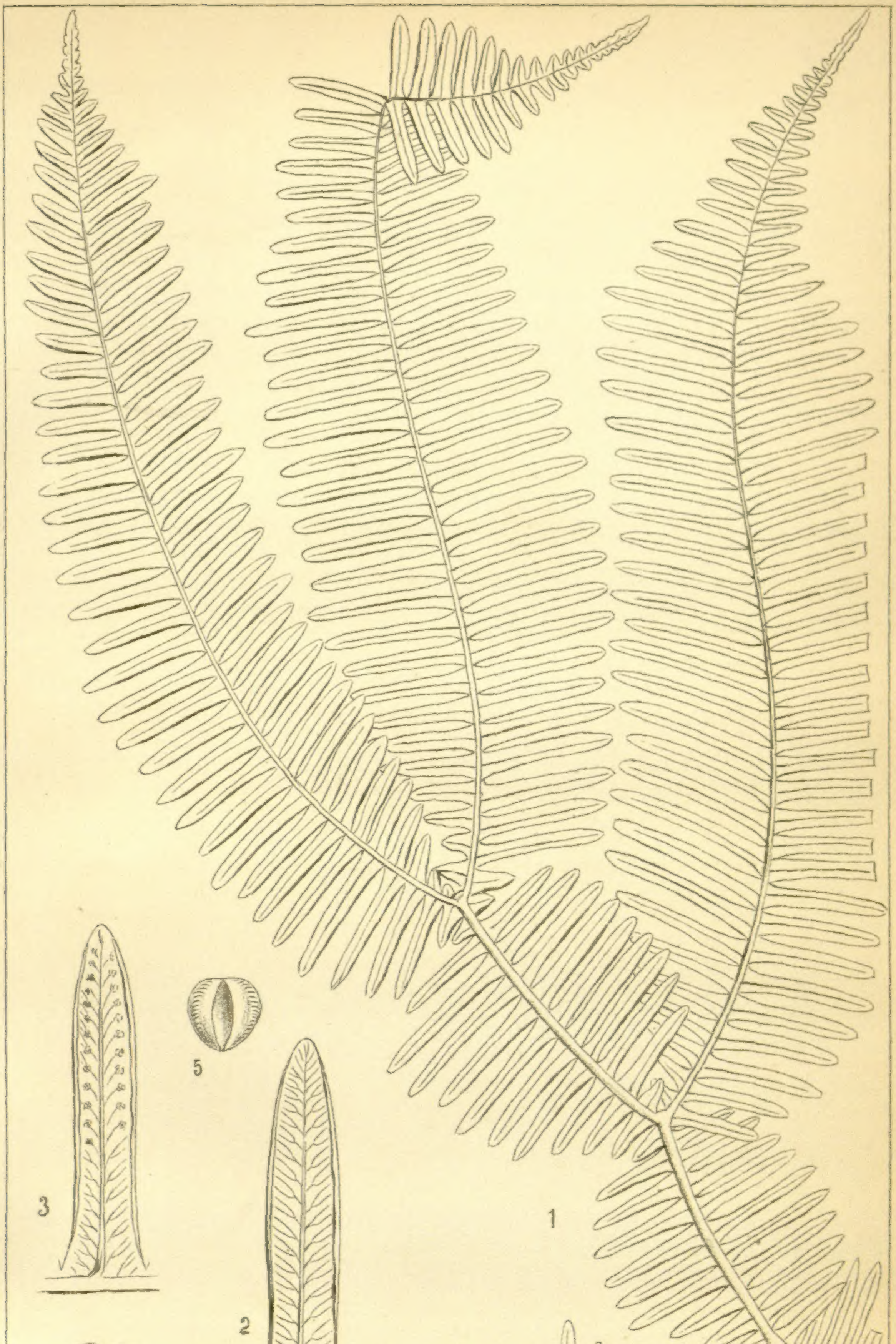
Gleichenia Milnei, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 449; frondibus amplis glabris utrinque viridibus, pinnis deltoideis triplo dichotomiter furcatis pedunculo nudo basi segmentis parvis reflexis stipulatis, segmentis ultimis linearibus obtusis adnatis patulis, venulis multijugis erecto-patentibus profunde furcatis, soris parvis medialibus.

Hab. Aneiteum, *Milne*, 341; *Macgillivray*, 912; Vanecolla, *C. Moore.*

Segmenta stipularia 6–12 lin. longa. *Pedunculi* nudi pinnarum $1\frac{1}{2}$–2 poll. longi. *Segmenta ultima* 6–9 lin. longa, 1 lin. lata.

Closely allied to the Mascarene and Malayan *G. flagellaris*, Spreng., and the Polynesian *G. oceanica*, Kuhn.—J. G. Baker.

Fig. 1. Portion of a pinna, *life size.* 2. Final segment, sterile. 3. Final segment, fertile. 4. Sorus. 5. Sporange, slit open. *All enlarged.*



Gleichenia Milnei, Baker.

Plate 1603.

DICKSONIA CHAMISSOI, *Hook. et Baker.*

Filices, Suborder Polypodiaceæ, Tribe Dicksonieæ.

Dicksonia (Cibotium) Chamissoi, *Hook. et Baker, Syn. Fil.* p. 50; paleis basalibus filiformibus mollibus brunneis, frondibus amplis deltoideis rigide subcoriaceis dorso pallide viridibus furfuraceis, pinnis oblongo-lanceolatis, pinnulis sessilibus lanceolatis basi pinnatis sursum profunde pinnatifidis, segmentis tertiariis oblongis integris multijugis, venulis erecto-patentibus furcatis, indusio inflexo rigide coriaceo, valva interiore lingulata exteriore duplo longiore.

Cibotium Chamissoi, Kaulf. Enum. p. 230, tab. 1, fig. 14; Spreng. Syst. p. 127; Presl, Tent. p. 69, tab. 11, fig. 8; Brack. Fil. p. 279; Moore, Ind. Fil. p. 259.

Dicksonia splendens, Desv. Prodr. p. 318.

Pinonia splendens, Gaudich. in Ann. Sc. Nat. vol. iii. p. 507; Freyc. Voy. pp. 96, 369, tab. 21.

Hab. Sandwich Islands, *Gaudichaud, Macrae, Barclay, Hildebrandt.*

Pinnæ inferiores pedales vel sesquipedales. *Pinnulæ* 4–5 poll. longæ, 6–9 lin. latæ.

This is one of the most interesting of the endemic ferns of the Sandwich Islands. Two genera have been founded upon it, *Cibotium* of Kaulfuss, and *Pinonia* of Gaudichaud.—J. G. Baker.

Fig. 1. An entire pinna, *life size.* 2. Sterile tertiary segment. 3. Fertile segment. 4. Single sorus, with indusium. 5. Sporange. *All more or less enlarged.*

Dicksonia (Cibotium) Chamissoi, Hook., & Baker.

Plate 1604.

DICKSONIA ABRUPTA, *Bory.*

Filices, Suborder Polypodiaceæ, Tribe Dicksonieæ.

Dicksonia abrupta, *Bory ; Hook. et Baker, Syn. Fil.* p. 52; stipibus brevibus nudis cæspitosis, frondibus lanceolatis simpliciter pinnatis glabris viridibus, pinnis inæquilateraliter lanceolatis antice productis facie prope marginem punctis paucis cretaceis præditis basi articulatis truncatis, fertilibus angustioribus, inferioribus sensim minoribus, venulis crebris arcuato-ascendentibus furcatis, soris copiosis patulis, indusio bivalvi valvis coriaceis semiorbicularibus interiore paulo minore.

Leptopleuria abrupta, Presl, Tent. p. 137, tab. 5, figs. 9–11.

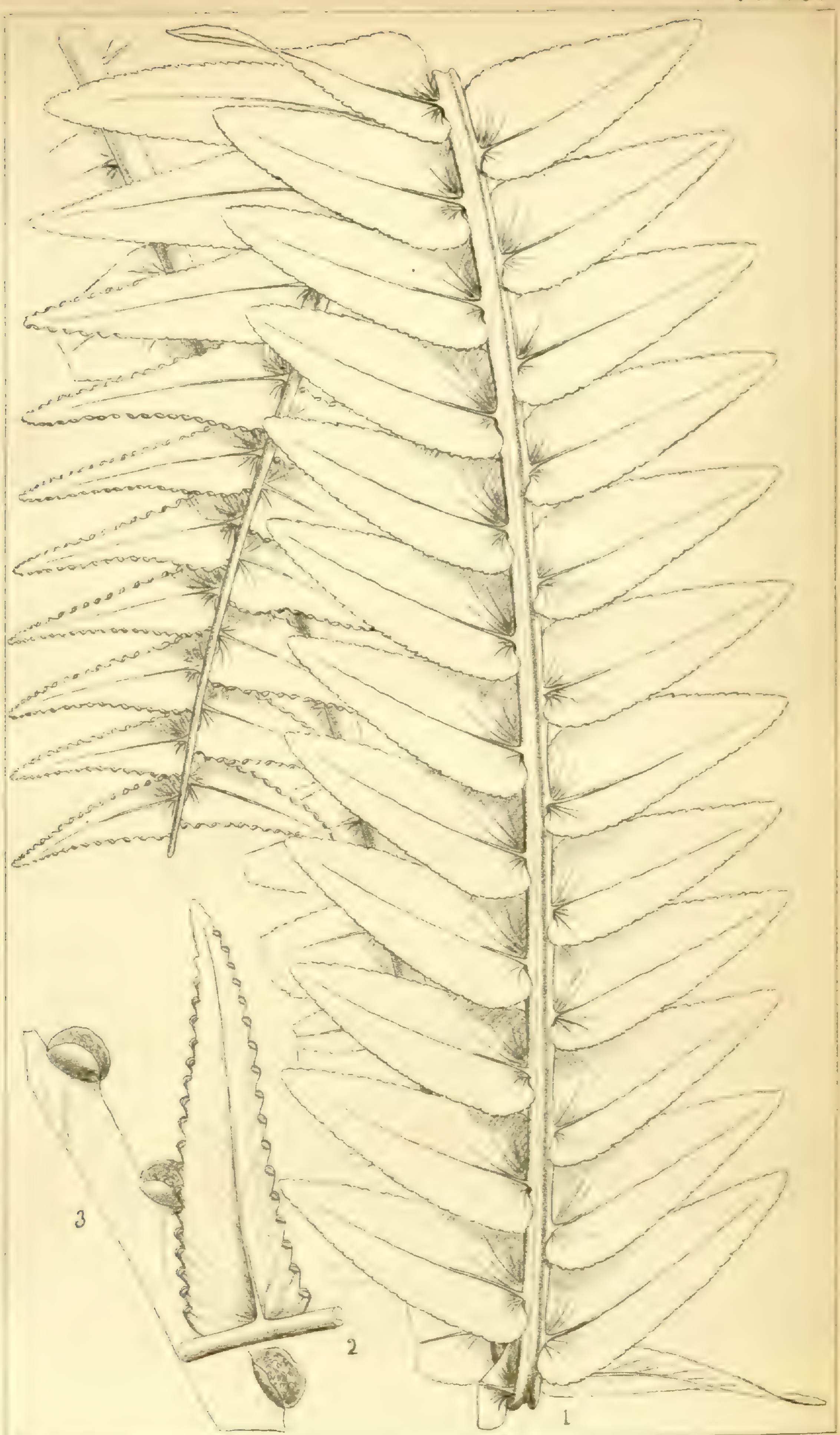
Nephrolepis abrupta, Mett. Fil. Hort. Lips. p. 99 ; Kuhn, Fil. Afric. p. 154.

Hab. Bourbon, *Carmichael*, *Balfour*; Mauritius, *Lady Barkly* ; Madagascar, *Pervillé*, 725.

Lamina sesquipedalis vel bipedalis, 4–5 poll. lata. *Pinnæ* basi 3–9 lin. latæ.

This has the habit, the cretaceous dots and deciduous pinnæ of *Nephrolepis*, but the indusium is that of a normal *Dicksonia*.—J. G. Baker.

Fig. 1. Portion of frond. 2. A single fertile pinna, *both life size*. 3. Margin of fertile pinna, showing sori and indusium. *Enlarged.*



Dicksonia abrupta, Bory.

Plate 1605.

DICKSONIA SCANDENS, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Dicksonieæ.

Dicksonia scandens, *Baker in Journ. Bot.* 1877, p. 162; rhizomate late repente, stipitibus remotis nudis elongatis, frondibus amplis deltoideis tripinnatis subcoriaceis glabris viridibus rachibus furfuraceis, pinnis oblongo-lanceolatis infimis reductis, pinnulis sessilibus multijugis lanceolatis obtusis profunde pinnatifidis, segmentis tertiariis oblongis obtusis contiguis ascendentibus, venis pinnatis venulis ascendentibus simplicibus, indusii valva exteriore majore recurvata.

Hab. Andes of Quito, *Sodiro.*

Stipes 9–10-pollicaris. *Pinnæ* majores pedales et ultra, 2–2½ poll. latæ. *Pinnulæ* 4 lin. latæ.

This is one of the numerous new ferns which have been discovered by Father Sodiro, who, during the last twenty years, has worked diligently and successfully at the botany of Ecuador. Its indusium is peculiar, and the long comparatively slender scandent rhizome is a new feature in this genus.—J. G. Baker.

Fig. 1. An entire pinna, *life size.* 2. A pinnule. 3. Margin of fertile pinnule, showing two sori. *Both enlarged.*

Dicksonia scandens, Baker.

Plate 1606.

DICKSONIA HENRIETTÆ, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Dicksonieæ.

Dicksonia Henriettæ, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 462; frondibus amplis deltoideis quadripinnatis viridibus glabris, rachibus nudis, pinnis deltoideis infimis maximis, pinnulis et segmentis tertiariis deltoideis basi postice cuneato-truncatis, segmentis ultimis rhomboideis obtusis pinnatifidis basi postice cuneato-truncatis, venulis remotis perspicuis ascendentibus, indusio campanulato valva exteriore magis producto.

Hab. Madagascar, *Miss H. Baker, Pool, Kitching, Humblot*, 412; *Hildebrandt*, 3765.

Pinnæ inferiores pedales vel sesquipedales, interdum 9–10 poll. latæ. *Pinnulæ* interdum semipedales.

This is one of the most characteristic large ferns of the forests of Central Madagascar. It was first sent home in 1872 by my relative, Miss Henrietta Baker, and has since been repeatedly collected. It is most nearly allied to the widely spread *D. cicutaria*, Sw., of Tropical America.—J. G. Baker.

Fig. 1. Pinna, *life size.* 2. Sterile ultimate segment. 3. Fertile ultimate segment. 4. Margin of segment, with one sorus and indusium. *All enlarged.*

Woodsia Henriettae, Baker.

Plate 1607.

LECANOPTERIS CURTISII, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Dicksonieæ.

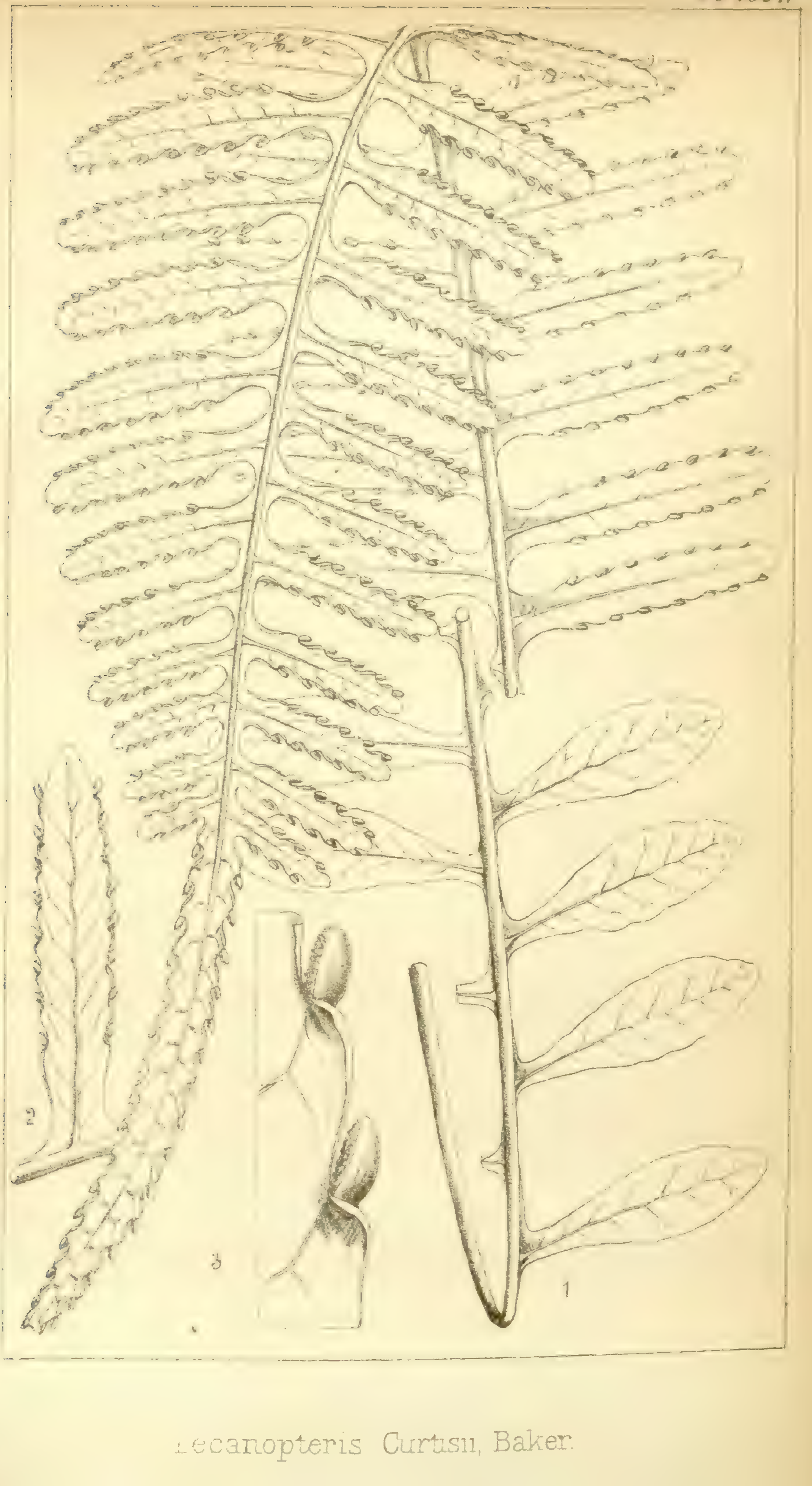
Lecanopteris Curtisii, *Baker in Journ. Bot.* 1881, p. 366; stipitibus brevibus strictis nudis, frondibus lanceolatis caudatis simpliciter pinnatis glabris subcoriaceis dorso glaucis, pinnis ligulatis obtusis basi dilatatis adnatis, fertilibus crenatis, sterilibus integris, venis primariis perspicuis erecto-patentibus, intermediis subtilibus obscuris in areolas hexagonas anastomosantibus, indusio unilaterali cucullato persistente.

Hab. Sumatra, *Curtis*.

Lamina sesquipedalis, $2\frac{1}{2}$–3 poll. lata. *Pinnæ* fertiles 3–4 lin. latæ.

At the date of the publication of our 'Synopsis Filicum' we had very little material, and this genus *Lecanopteris* was not admitted. Since that date we have received numerous specimens of the plant on which it was founded by Blume; and in addition to Blume's two species at least two others have been discovered, all in the Malay region. Of the present plant the rhizome is not known, but no doubt is like that of the other species—stout and tuber-like, sending out phyliopodia which are articulated at the apex.—J. G. Baker.

Fig. 1. Apex and base of a frond, *life size*. 2. Fertile pinna. 3. Margin of fertile pinna, showing two sori. *Both enlarged*.



Lecanopteris Curtisii, Baker.

Plate 1608.

DEPARIA NEPHRODIOIDES, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Dicksonieæ.

Deparia nephrodioides, *Baker in Gard. Chron.* 1872, 253; stipitibus elongatis deorsum paleis atrocastaneis lanceolatis rigidulis vestitis, frondibus deltoideis decompositis glabris viridibus, pinnis deltoideis basi postice cuneato-truncatis infimis multo maximis petiolatis, pinnulis inæquilateraliter deltoideis, segmentis tertiariis profunde pinnatifidis, lobis erecto-patentibus obtusis vel corniculatis, venulis ultimis furcatis, soris crebris, indusio profunde bivalvi.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 463; *Benth. Fl. Austral.* vol. vii. p. 714.

Davallia nephrodioides, F. Muell. Frag. vol. x. p. 104.

Hab. Lord Howe's Island, *C. Moore, Fullagar.*

Lamina interdum 3–4-pedalis, 12–18 poll. lata. *Stipites* pedales. *Paleæ* basales semipollicares.

Lord Howe's Island has been well explored for the first time of late years, and has been found to produce several curious endemic ferns, of which this is one of the most interesting. In habit and cutting it much resembles *Nephrodium decompositum*.—J. G. Baker.

Fig. 1. Pinna, *life size.* 2. Tertiary segment, with sori. 3. Edge of tertiary segment. 4. Sporange. *All enlarged.*

J. Allen del.

Deparia nephrodioides, Baker.

Plate 1609.

HYMENOPHYLLUM POOLII, *Baker*.

Filices, Suborder Hymenophylleæ.

Hymenophyllum Poolii, *Baker in Journ. Linn. Soc.* vol. xv. p. 413; rhizomate filiformi longe repente, stipitibus elongatis gracillimis sursum pilosis, frondibus lanceolatis bipinnatifidis membranaceis dense stellato-pilosis, rachi primaria supra basin anguste alata, pinnis ascendentibus inæquilateraliter rhomboideis profunde pinnatifidis basi postice cuneato-truncatis infimis reductis, pinnulis contiguis ascendentibus linearibus integris uninervatis infimis anticis furcatis, soris parvis terminalibus, indusii valvis rotundatis.

Hab. Forests of Central Madagascar, *Mrs. Pool*.

Stipites 1½–2-pollicares. *Lamina* 3–5-pollicaris, medio 9–10 lin. lata. *Pinnæ centrales* 9–10 lin. longæ.

This formed part of the first large collection of ferns which we have received of late years from Central Madagascar, which was formed by the late Mrs. Pool. It is most nearly allied to the South American and New Zealand *H. subtilissimum*, Kunze.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. Apex of forked lower anterior pinnule. 3. Apex of pinnule, showing sorus. *Both enlarged*.

J Allen del

Hymenophyllum Poolii Baker.

Plate 1610.

HYMENOPHYLLUM DEJECTUM, *Baker.*

Filices, Suborder Hymenophylleæ.

Hymenophyllum dejectum, *Baker* (*sp. nov.*); stipitibus productis cum rachi primaria stricta paleis lanceolatis albidis præditis, frondibus oblongo-lanceolatis 3–4-pinnatifidis glabris pro genere firmulis siccitate nigrescentibus, pinnis confertis oblongo-lanceolatis squarrosis, infimis sensim reductis, pinnulis deltoideis imbricatis, segmentis ultimis linearibus integris uninervatis, soris ad pinnularum segmentos inferiores terminalibus, indusii valvis rigidulis rotundatis truncatis vel leviter emarginatis.

Hab. Summit of Mount Roraima, *E. F. im Thurn*, 318.

Stipites 1½–2-pollicares. *Lamina* 4–5-pollicaris, medio 10–12 lin. lata. *Pinnæ centrales* 8–9 lin. longæ.

This is one of the most curious of the many new ferns discovered by Mr. Im Thurn in his recent expedition to Mount Roraima. It came from the very summit of the mountain, which his party scaled for the first time. Its nearest alliance is with *H. polyanthos* and *H. myriocarpum*.—J. G. Baker.

Fig. 1. Whole plant, *life size.* 2. Pinna. 3, 4. Portion of pinnule, with sorus. 5. Sorus. 6. Sporange. *All more or less enlarged.*

J.Allen del.

Hymenophyllum dejectum, Baker.

Plate 1611.

HYMENOPHYLLUM BALDWINII, *Eaton*.

Filices, Suborder Hymenophylleæ.

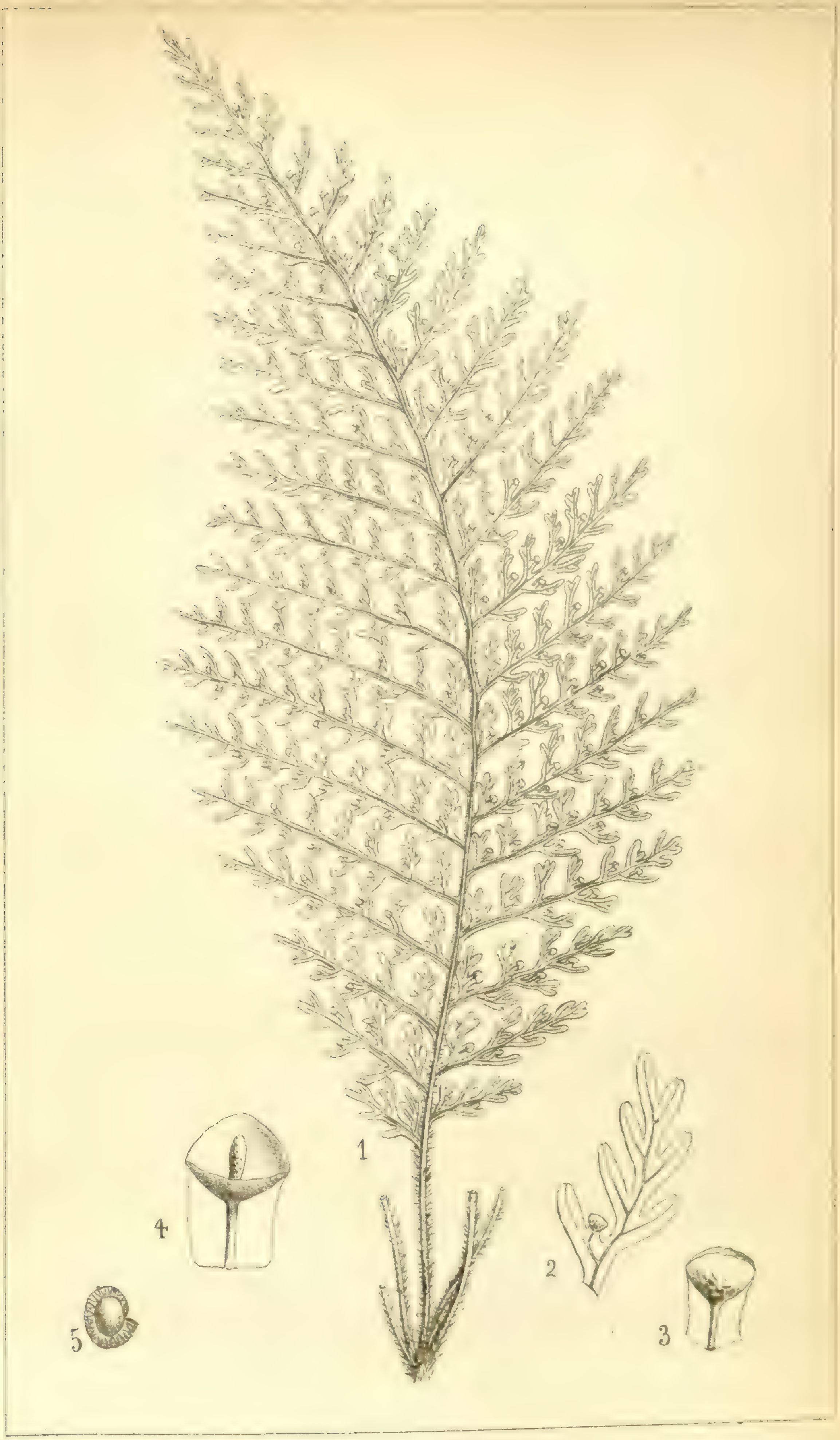
Hymenophyllum Baldwinii, *Eaton in Bull. Torrey Club*, vol. vi. p. 293; stipitibus cæspitosis brevibus paleis subulatis brunneis debilibus vestitis, frondibus ovato-lanceolatis tripinnatifidis membranaceis glabris, pinnis confertis lanceolatis ascendentibus basi postice cuneato-truncatis inferioribus sensim minoribus, pinnulis inferioribus rhomboideis, segmentis tertiariis uninervatis oblongis vel lineari-oblongis integris, soris ad pinnularum segmentos inferiores terminalibus, indusio basi cuneato immerso, valvis rotundatis.

Hab. Oahu, Sandwich Islands, *Hon. D. D. Baldwin, Miss E. S. Boyd.*

Stipites pollicares. *Lamina* 4–6-pollicaris, medio 2–3-poll. lata. *Pinnæ centrales* $1\frac{1}{2}$–2-pollicares, 3 lin. latæ.

This handsome fern has about equal right to be regarded as a *Trichomanes* and a *Hymenophyllum*. In cutting and texture it most resembles some of the smaller forms of *Trichomanes apiifolium*. All our three specimens came from Professor Eaton.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. Lower pinnule. 3, 4. Sori. 5. Sporange. *All enlarged.*



J.Allen del.

Hymenophyllum Baldwinii, Eaton.

Plate 1612.

HYMENOPHYLLUM GLAZIOVII, *Baker.*

Filices, Suborder Hymenophylleæ.

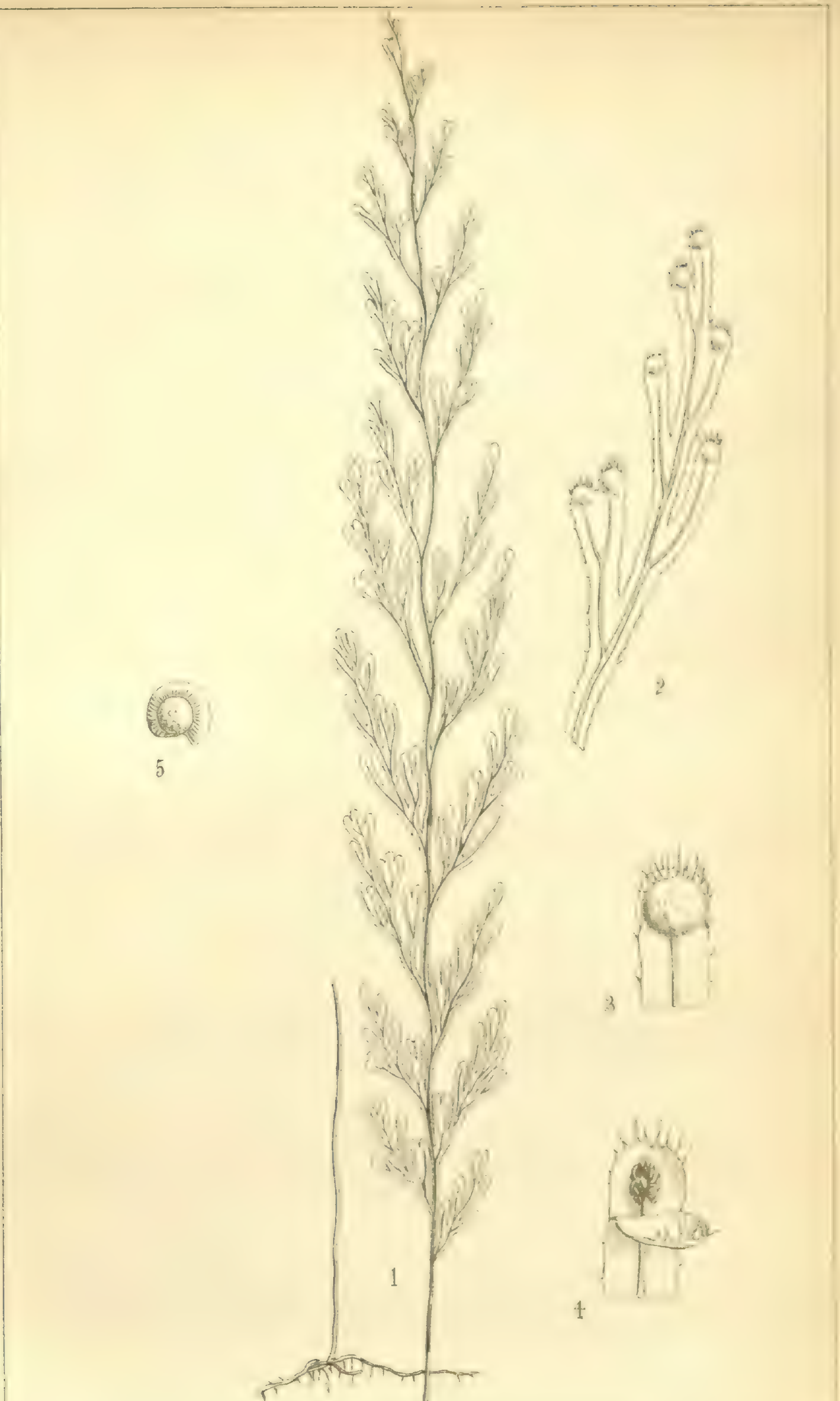
Hymenophyllum Glaziovii, *Baker* (*sp.nov.*); rhizomate filiformi longe repente, stipitibus productis filiformibus glabris, frondibus lanceolatis bipinnatifidis ciliatis, rachi primaria alata, pinnis laxis ascendentibus lanceolatis ad alam angustam pinnatifidis basi postice cuneato-truncatis inferioribus reductis, pinnulis laxis linearibus uninervatis simplicibus vel inferioribus furcatis, soris terminalibus, indusii valvis orbicularibus dense ciliatis.

Hab. Rio Janeiro, *Glaziou*, 7890.

Stipites 2–3-pollicares. *Lamina* 6–8-pollicaris, medio 9–12 lin. lata.

Received in 1875 from Dr. Glaziou, director of the Passeio Publico at Rio Janeiro, who has collected most assiduously in Southern and Central Brazil and the Amazon valley during the last fifteen years. Its nearest allies amongst well-known species are *H. hirsutum* and *H. ciliatum*.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. A pinna. 3. A sorus with closed valves. 4. A sorus with valves of the indusium opened. 5. Sporange. *All enlarged*.



J.Allen del.

Hymenophyllum Glaziovii, Baker.

PLATE 1613.

HYMENOPHYLLUM TRIANGULARE, *Baker.*

FILICES, Suborder HYMENOPHYLLEÆ.

Hymenophyllum (Leptiocionium) triangulare, *Baker in Hook. et Baker, Syn. Fil.* p. 69; rhizomate filiformi longe repente, stipitibus elongatis filiformibus nudis, frondibus ovato-oblongis tripinnatifidis glabris, rachi primaria supra basin alata, pinnis ascendentibus basi postice cuneato-truncatis infimis maximis deltoideis, pinnulis inæquilateraliter rhomboideis, segmentis tertiariis linearibus uninervatis argute serratis, soris paucis basi immersis, indusii valvis ovatis obtusis subintegris.

H. Mannianum, Mett.; Kuhn, Fil. Afric. p. 40.

HAB. Mountains of Fernando Po, alt. 3,000 ft., *Mann*, 333.

Stipites 2–3-pollicares. *Lamina* 4–6 poll. longa, basi 2–2½ poll. lata. *Segmenta ultima* 1½–2 lin. longa.

Discovered by Gustav Mann in 1860. It is allied most nearly to the New Zealand and Polynesian *H. multifidum* and *H. bivalve*.—J. G. BAKER.

Fig. 1. Whole plant, *life size*. 2. Pinnule. 3. Portion of pinnule. 4. Indusium. 5, 6. Sporangia. ***More or less enlarged.***

J Allen del

Hymenophyllum triangulare, Baker.

PLATE 1614.

HYMENOPHYLLUM ARMSTRONGII, *Kirk.*

FILICES, Suborder HYMENOPHYLLEÆ.

Hymenophyllum Armstrongii, *Kirk in Trans. N. Zeal. Instit.* vol. x. (1877), p. 43, tab. 21, fig. A; dense cæspitosum, rhizomate filiformi longe repente, stipitibus brevissimis, frondibus parvis simplicibus vel furcatis vel raro palmatifidis glabris, segmentis ligulatis margine incrassatis setoso-ciliatis, soris terminalibus basi immersis, indusii valvis rigidulis ovatis obtusis integris margine incrassatis.

H. melanocheilos, Colenso in Trans. N. Zeal. Instit. vol. xvii. p. 255.

Trichomanes Armstrongii, Baker in Hook. et Baker, Syn. Fil. edit. 2, p. 465.

HAB. New Zealand, *Armstrong*, *Enys*, *Kirk*, 618; *Rowson.*

Stipites 1–2 lin. longi. *Lamina* 3–6 lin. longa, segmentis $\frac{3}{4}$–1 lin. latis.

This is one of the most interesting of the new ferns that have been discovered of late years in New Zealand. We first received it from Mr. Armstrong in 1868.—J. G. BAKER.

Fig. 1. Whole plant, *life size.* 2. Whole plant. 3, 4, 5, 6. Upper part of fertile segments, showing the sorus and indusium from different points of view. *All enlarged.*

4

3

1

6

2

5

J. Allen, lith.

Hymenophyllum Armstrongii, Kirk.

Plate 1615.

TRICHOMANES POWELLII, *Baker.*

Filices, Suborder Hymenophylleæ.

Trichomanes Powellii, *Baker in Hook. et Baker, Syn. Fil.* p. 76; dense cæspitosum, rhizomate filiformi longe repente, stipitibus brevissimis vel subnullis, frondibus minutis glabris furcatis vel palmatifidis, segmentis oblongis vel lineari-oblongis uninervatis margine nudis haud incrassatis, soris terminalibus profunde immersis, indusio infundibulari valvis brevibus rotundatis patulis, receptaculo breviter exserto.

Hab. Mountains of Samoa, alt. 2,000 ft., *Rev. J. Powell, Horne,* 41.

Lamina 6–12 lin. longa, segmentis 1 lin. latis.

Allied to *T. digitatum* and the Mascarene *T. flabellatum.* It was discovered by the Rev. T. Powell in the island of Upolu in 1864.—J. G. Baker.

Fig. 1. Whole plant, *life size.* 2. Whole plant. 3, 4, 5. Upper part of fertile segments. *All enlarged.*

5

4

1

3

2

J Ailen del

Trichomanes Powellii, Baker.

Plate 1616.

TRICHOMANES LYALLII, *Hook. et Baker.*

Filices, Suborder Hymenophylleæ.

Trichomanes Lyallii, *Hook. et Baker, Syn. Fil.* p. 77; rhizomate filiformi longe repente, stipitibus capillaribus elongatis erectis nudis, frondibus membranaceis glabris palmatifidis deltoideis vel orbicularibus, segmentis linearibus uninervatis margine parce breviter setoso-ciliatis haud incrassatis, soris profunde immersis, indusio cuneato ore breviter bilabiato.

Hymenophyllum Lyallii, Hook. fil. Fl. N. Zeal. vol. ii. p. 16; Handb. p. 355.

Hab. New Zealand, Thomson's Sound, *Dr. Lyall*; Otago, *Hector and Buchanan*; Titirangi Ranges, *Cheeseman*.

Stipites 9–15 lin. longi. *Lamina* 9–12 lin. longa et lata, segmentis 1–2 lin. longis, $\frac{3}{4}$ lin. latis.—J. G. Baker.

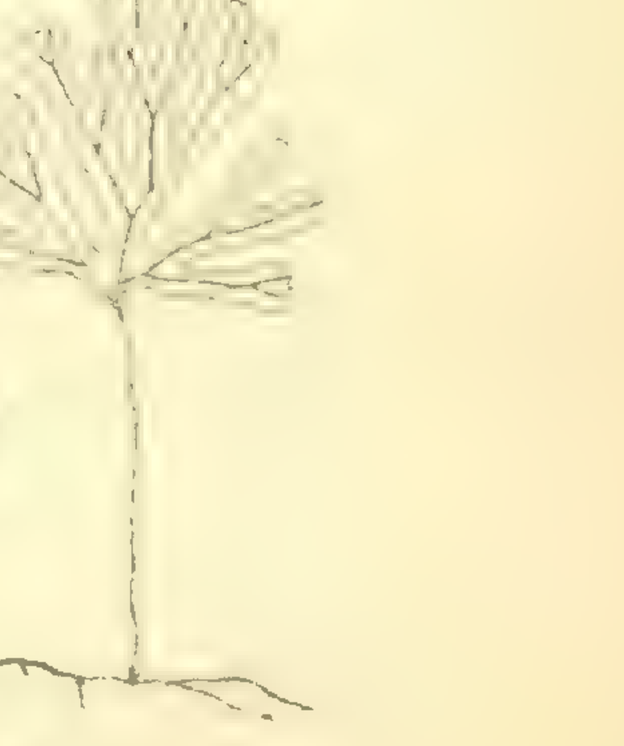
Fig. 1. Whole plant, *life size*. 2. Whole plant. 3, 4, 5, 6. Tips of fertile segments. *All enlarged.*

4

5

3

1



6

2

J Allen del.

Trichomanes Lyallii Hook.

Plate 1617.

TRICHOMANES KALBREYERI, *Baker.*

Filices, Suborder Hymenophylleæ.

Trichomanes Kalbreyeri, *Baker* (*sp.nov.*); rhizomate breviter repente paleis lanceolatis parvis membranaceis ferrugineis prædito, stipitibus brevibus ad basin conspicue alatis, frondibus oblongo-lanceolatis bipinnatifidis glabris præsertim ad venas primarias hispidulis, pinnis lanceolatis inferioribus sensim minoribus, pinnulis linearibus uninervatis erecto-patentibus simplicibus vel infimis furcatis, soris terminalibus, indusio infundibulari ad apicem sæpissime alato, ore truncato vel obscure bilabiato, receptaculo longe exserto.

Hab. New Granada, province of Antioquia, alt. 6,500 ft., *Kalbreyer*, 1857.

Stipites 1–2 poll. longi. *Lamina* 4–6-pollicaris, medio $1\frac{1}{2}$–2 poll. lata.

Allied to *T. Kaulfussii* and *macilentum.* Discovered by Mr. Kalbreyer, 1880, on a collecting expedition for Messrs. Veitch.—J. G. Baker.

Fig. 1. Whole plant, *life size.* 2. Apex of fertile pinnule, showing sorus. 3. The same, with half the indusium cut away. *Both enlarged.*

J.Allen del.

Trichomanes Kalbreyeri, Baker.

Plate 1618.

TRICHOMANES BRACHYBLASTOS, *Mett.*

Filices, Suborder Hymenophylleæ.

Trichomanes brachyblastos, *Mett.; Kuhn in Linnæa*, vol. xxxv. p. 388; rhizomate breviter repente, stipitibus strictis elongatis erectis anguste alatis, frondibus oblongo-deltoideis decompositis firmulis glabris, pinnis erecto-patentibus deltoideis imbricatis basi postice cuneato-truncatis, infimis reductis, segmentis ultimis linearibus uninervatis, soris terminalibus immersis, indusio infundibulari ore truncato, receptaculo exserto.—*Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 466.

Hab. Eastern Peru, on Mount Guayrapurima, near Tarapoto. *Spruce*, 4703.

Stipites 4–5 poll. longi. *Lamina* 5–6-pollicaris, medio 2–2½ poll. lata. *Segmenta ultima* 1–1½ lin. longa, vix ½ lin. lata.

Allied to the well-known *T. maximum* of Malaya and Polynesia. Discovered by Dr. Spruce in 1856.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. Upper portion of fertile segment. 3. Apex of fertile segment, with sorus. 4. Sorus, with half the indusium cut away. *All enlarged.*

J. Allen del

Trichomanes brachyblastos, Mett.

PLATE 1619.

TRICHOMANES HISPIDULUM.

FILICES, Suborder HYMENOPHYLLEÆ.

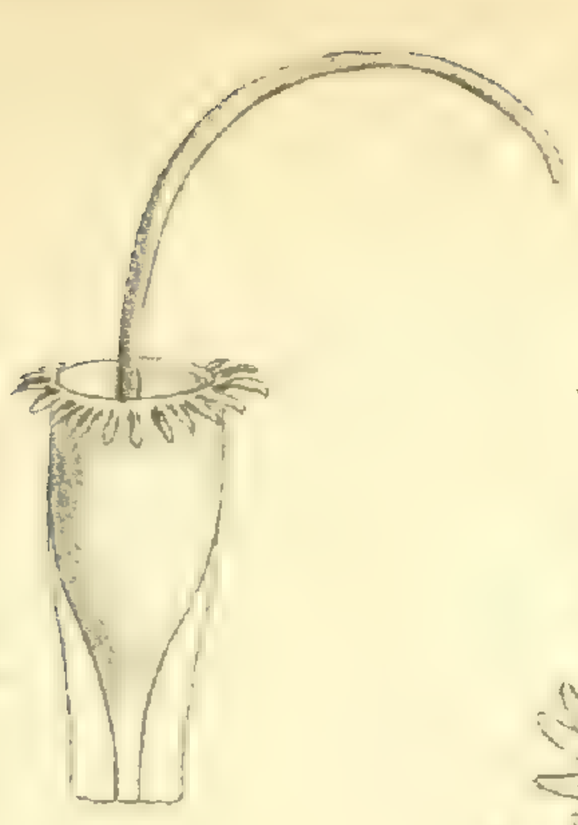
Trichomanes hispidulum, *Mett.*; *Kuhn in Linnæa*, vol. xxxv. p. 389; caudice erecto, paleis linearibus minutis castaneis, stipitibus erectis elongatis angustissime marginatis, frondibus deltoideis decompositis pro genere crassis dorso hispidulis siccitate nigrescentibus, rachibus furfuraceis, pinnis deltoideis, infimis maximis postice productis, reliquis erecto-patentibus basi postice cuneato-truncatis, segmentis ultimis linearibus uninervatis, soris basi solum immersis, indusio infundibulari ore truncato setis dense ciliato, receptaculo longe exserto.—*Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 466.

HAB. Borneo, in the forests of Labuan, *Motley*.

Stipites 4–7 poll. longi. *Lamina* pedalis, basi 6–8 poll. lata. *Segmenta ultima* $1\frac{1}{2}$–2 lin. longa, $\frac{1}{2}$ lin. lata.

Allied to *T. maximum* and the last species.—J. G. BAKER.

Fig. 1. A small frond, *life size*. 2. Fertile segment. 3, 4. Sorus, entire. 5. Sorus, with half the indusium cut away. *All enlarged*.



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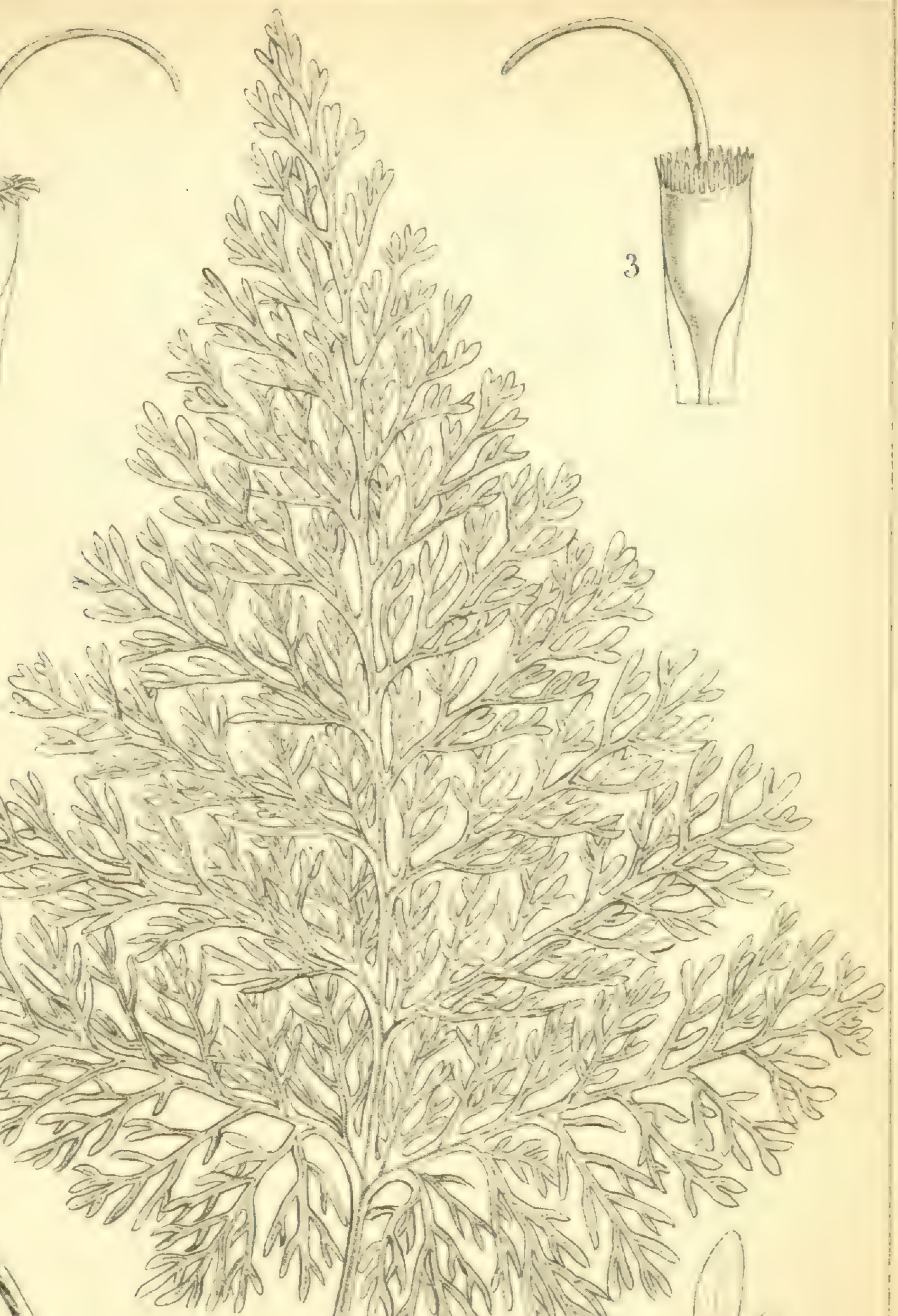

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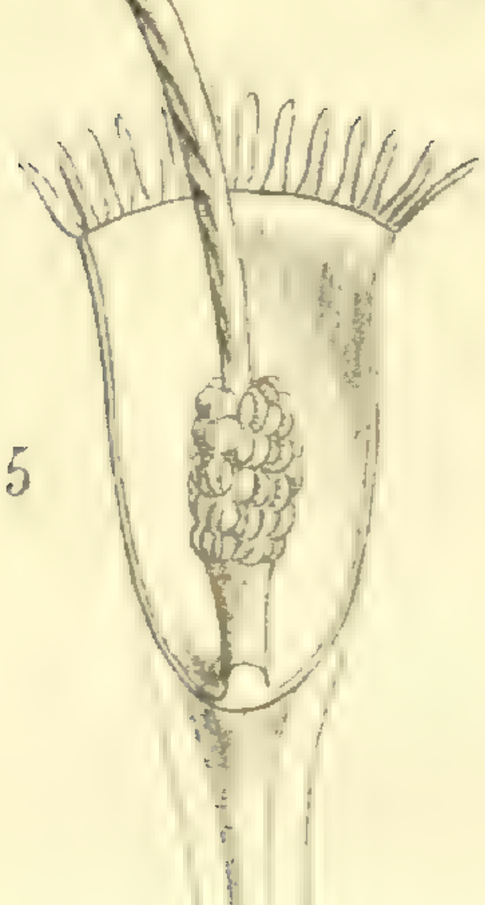

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J.Allen del.

Trichomanes hispidulum, Mett.

Plate 1620.

DAVALLIA TYERMANII, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Davallieæ.

Davallia (Humata) Tyermanii, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 467; rhizomate epigæo valido longe repente paleis adpressis lanceolatis ferrugineis vel albidis dense vestito, stipitibus strictis erectis nudis, frondibus deltoideis 3–4-pinnatifidis subcoriaceis glabris, rachi primaria anguste alata, pinnis infimis maximis deltoideis postice productis, reliquis ascendentibus basi postice cuneato-truncatis, segmentis tertiariis oblongis profunde pinnatifidis basi attenuatis, segmentis ultimis obtusis vel corniculatis, soris medialibus, indusio orbiculari coriaceo marginibus liberis.

Humata Tyermanii, Moore in Gard. Chron. 1871, p. 870, tab. 178.

Hab. China; Ningpo, *Everard*; Kiu-kiang and banks of the river Yangtse, *Maries*.

Stipites 2–3 poll. longi. *Lamina* 3–6-pollicaris, 3–4 poll. lata.

Habit of *D. bullata*, but the sorus and indusium entirely different. We first received it from Mr. Tyerman, of the Liverpool Botanic Gardens, in 1869; and he thought it had been received from West Africa.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. Tertiary segment of lowest pinna. 3, 4. Sori, with indusia. *All enlarged*.

J.Allen del.

Davallia Tyermanii, Baker.

Plate 1621.

DAVALLIA BOTRYCHIOIDES, *Hook. et Baker.*

Filices, Suborder Polypodiaceæ, Tribe Davallieæ.

Davallia (Humata) botrychioides, *Hook. et Baker, Syn. Fil.* p. 90; rhizomate gracili epigæo longe repente, paleis lanceolatis rigidulis adpressis castaneis tenuiter vestito, stipitibus elongatis gracilibus nudis, frondibus deltoideis 3–4-pinnatifidis subcoriaceis glabris, pinnis deltoideis basi postice cuneato-truncatis, infimis maximis, segmentis ultimis sterilibus oblongis, frondibus fertilibus magis dissectis, segmentis ultimis minutis obtusis vel corniculatis, indusio reniformi angusto coriaceo glabro, marginibus liberis.

Humata botrychioides, Brack. Fil. U.S. Expl. Expedit. p. 231, tab. 32, fig. 1; Carruth. in Seem. Fl. Vit. p. 336.

H. rigida and *multifida*, Carruth. in Seem. Fl. Vit. p. 335.

Hab. Aneiteum, *Milne*, 294, 367, *Macgillivray*, 43; Fiji, *Horne*, 800, *Milne*, 330, *Lieut. Hope, Hon. J. B. Thurston*; Samoa, *Whitmee*, 36; Society Isles, *Solander*.

Stipites 3–5-pollicares. *Lamina* 3–6-pollicaris.

A variable plant, widely spread in Polynesia, differing from the other species of the subgenus *Humata* by its dimorphic fronds.—J. G. Baker.

Figs. 1, 2. Whole plant, *life size*. 3. Palea of the rhizome. 4. Pinnule of fertile frond. 5. Segment of fertile frond, with a single sorus. *All more or less enlarged.*

J.Allen del.

Davallia botrychioides, Brack

Plate 1622.

DAVALLIA KINGII, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Davallieæ.

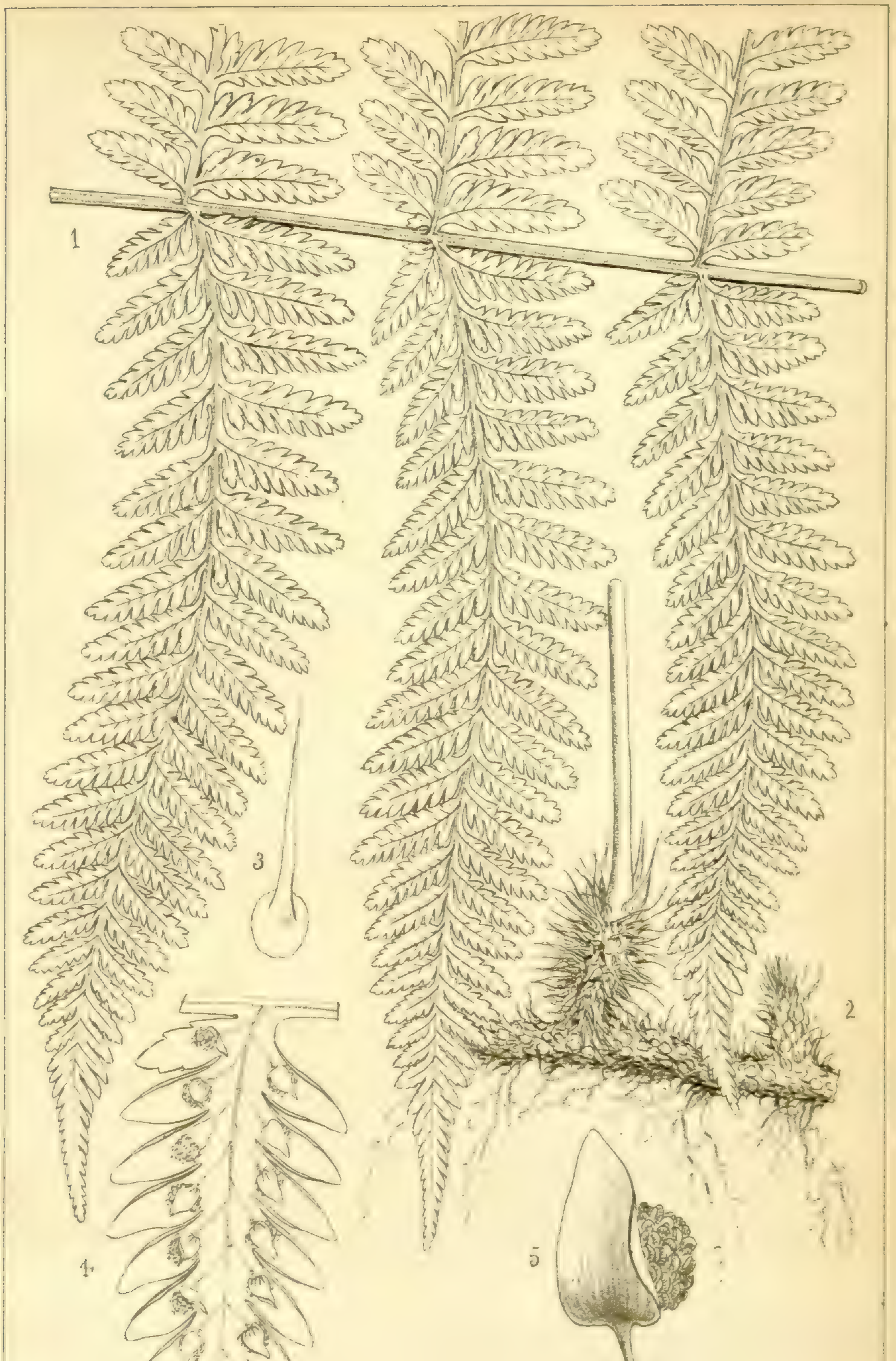
Davallia (Leucostegia) Kingii, *Baker* (*sp. nov.*); rhizomate valido epigæo lignoso longe repente, paleis patulis densis subulatis basi peltatis margine libero membranaceo, stipitibus erectis strictis nudis, frondibus oblongo-lanceolatis tripinnatifidis utrinque parce pilosis, rachi primaria pilosa utrinque anguste alata, pinnis lanceolatis infimis haud reductis, pinnulis oblongis adnatis profunde pinnatifidis, segmentis tertiariis contiguis oblongis, soris ad basin segmentorum solitariis, indusio ovato marginibus liberis.

Hab. Java, Mount Waringin, alt. 4,600 ft., *H. O. Forbes* (King, 657).

Stipites semipedales. *Lamina* sesquipedalis, basi 9–10 poll. lata. *Pinnæ* centrales et inferiores 4–5 poll. longæ, 12–15 lin. latæ.

A very distinct novelty, discovered in 1882 by Mr. H. O. Forbes when collecting in Java for Dr. King. It is most like the Philippine *D. ciliata* in habit, but differs totally in the structure of the indusium. —J. G. Baker.

Fig. 1. Portion of frond. 2. Portion of rhizome, both *life size*. 3. Palea. 4. Fertile pinnule. 5. Sorus. *All more or less enlarged.*



J Allen del.

Davallia Kingii, Baker

Plate 1623.

DAVALLIA HYMENOPHYLLOIDES, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Davallieæ.

Davallia (Odontoloma) hymenophylloides, *Baker in Hook. et Baker, Syn. Fil.* p. 93; rhizomate hypogæo breviter repente, stipitibus brevissimis cæspitosis stramineis nudis, frondibus lanceolatis bipinnatifidis glabris læte viridibus e medio ad basin sensim attenuatis, pinnis multijugis dimidiatis ad alam angustam dissectis, pinnulis anguste cuneatis superioribus simplicibus uninervatis inferioribus furcatis, soris intramarginalibus ad venarum apices impositis, indusio obverse oblongo marginibus adnatis.

Lindsœa hymenophylloides, Blume, Enum. Fil Jav. p. 218.

Lindsaya repens var. *laciniata*, Mett.; Kuhn in Ann. Mus. Lugd. Bat. vol. iv. p. 277.

Hab. Java, *De Vriese*; Luzon, *Prof. Steerc*; New Caledonia, *Richards*; Fiji, *Horne*, 636.

Stipites 1–2 poll. longi. *Lamina* interdum pedalis et ultra, medio 15–18 lin. lata.

This very handsome fern is probably, as suggested by Mettenius, a laciniated variety of *Davallia repens*, but we have not yet seen any intermediate stages between the two.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. Lower pinnule. 3. Sorus, with indusium. *Both enlarged.*

Davallia hymenophylloides, Baker.

Plate 1624.

DAVALLIA PALLIDA, *Mett.*

Filices, Suborder Polypodiaceæ, Tribe Davallieæ.

Davallia (Microlepia) pallida, *Mett.*; *Kuhn in Linnæa*, vol. xxxvi. p. 142; rhizomate epigæo valido late repente, paleis lanceolatis castaneis, stipitibus elongatis erectis nudis stramineis, frondibus deltoideis decompositis magnis pallide viridibus glabris, rachibus nudis stramineis, pinnis deltoideis infimis maximis, superioribus pinnulisque basi postice cuneato-truncatis, segmentis ultimis rhomboideis obtusis vel corniculatis, soris submarginalibus ad venarum apices impositis, indusio orbiculari marginibus adnatis.—*Baker in Hook. and Baker, Syn. Fil.* edit. 2, p. 469.

Davallia Mooreana, Masters in Gard. Chron. 1869, p. 964, with woodcut.

Davallia (*Loxoscaphe*) *Beccariana*, Cesati, Fil. Born. p. 16, tab. 3, fig. 6.

Hab. Borneo, *Beccari*; Aneiteum, *Macgillivray*; Samoa, *Powell*, 203; *Whitmee*, 39.

Stipites pedales vel sesquipedales. *Lamina* 2–3-pedalis.

Closely resembling in general habit the Himalayan and Malayan *D. immersa*, Wallich, but the fronds do not die down in winter, and the structure of the indusium is totally different.—J. G. Baker.

Fig. 1. Portion of small frond. 2. Rhizome. *Both life size.* 3. Part view of fertile segment. 4. Back view of fertile segment. 5. Portion of fertile segment. 6. Palea of rhizome. *All enlarged.*

J. Allen del.

Davallia pallida, Mett.

Plate 1625.

DAVALLIA CLARKEI, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Davallieæ.

Davallia (Leucostegia) Clarkei, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 91 ; rhizomate valido epigæo late repente, paleis magnis lanceolatis membranaceis ferrugineis dense vestito, stipitibus gracilibus erectis supra basin nudis, frondibus deltoideis decompositis membranaceis glabris, pinnis lanceolato-deltoideis infimis haud reductis, pinnulis deltoideis basi postice cuneato-truncatis, segmentis ultimis linearibus uninervatis, soris ad segmentorum basin impositis, indusio semiorbiculari glabro marginibus liberis.

Acrophorus Hookeri, Moore, Ind. Fil. p. 2.

Leucostegia Hookeri, Beddome, Ferns Brit. Ind. p. 52.

Hab. Subalpine zone of Eastern Himalayas, 8,000–12,000 ft., *Sir J. D. Hooker, Thomson, Clarke, Levinge* ; mountains of Yunnan, *Delavay*.

Stipites 3–6-pollicares. *Lamina* 2–8 poll. longa, 1–6 poll. lata.

Allied to *Davallia pulchra*, Don, with which it was united in the first edition of our ' Synopsis Filicum.' In habit and cutting it closely resembles *Polypodium dareæforme*, with which it has been, I think wrongly, united by Mr. Clarke.—J. G. Baker.

Fig. 1. Frond. 2. Rhizome. *Both life size.* 3. Palea of the rhizome. 4. Sterile segment. 5, 6, 7. Fertile segments. *All more or less enlarged.*

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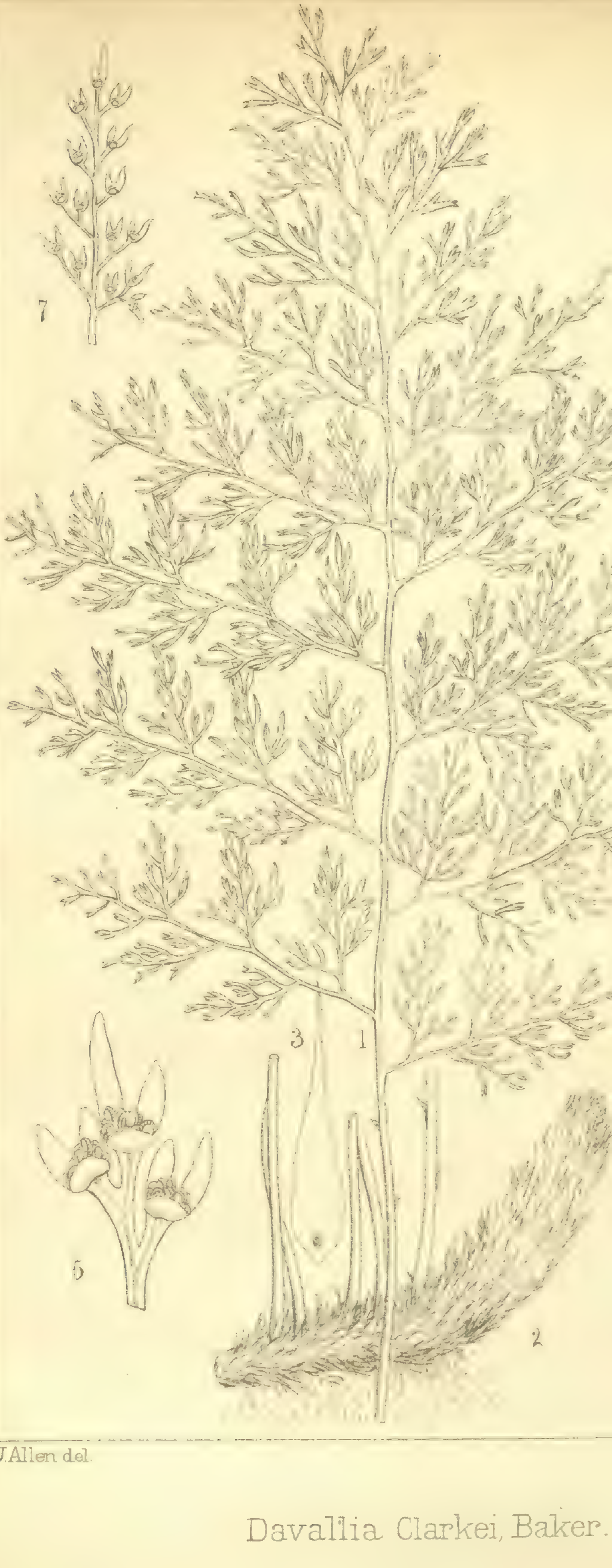

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J.Allen del.

Davallia Clarkei, Baker.

Plate 1626.

LINDSAYA JAMESONIOIDES, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Lindsayeæ.

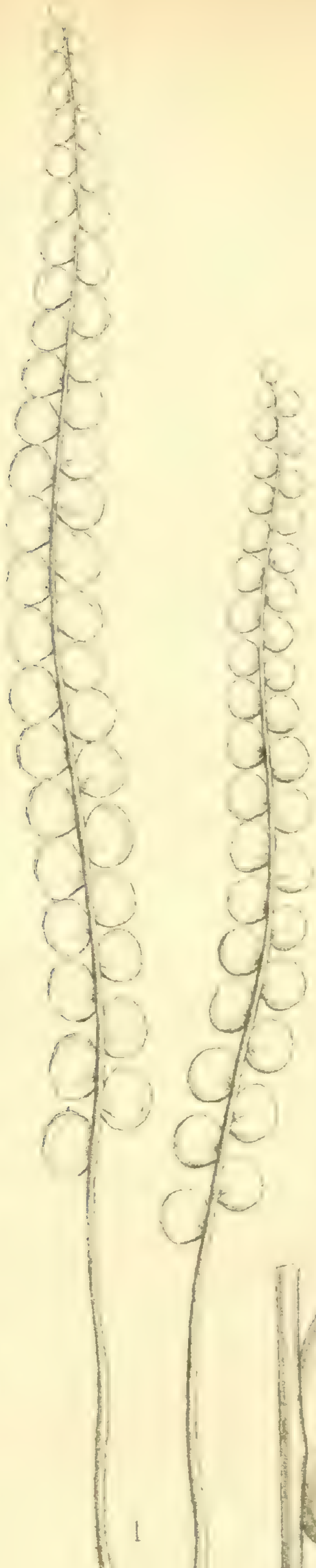
Lindsaya jamesonioides, *Baker in Journ. Bot.* 1879, p. 39; rhizomate breviter repente, paleis basalibus minutis lanceolatis nigris rigidulis, stipite cum rachi atro-castaneo nudo, frondibus linearibus simpliciter pinnatis rigidulis nudis, pinnis orbicularibus sessilibus, venis flabellatis occultis immersis, indusii valvis latis rigidulis persistentibus.

Hab. Borneo; rocks on Kinabalu, alt. 9,000 ft., *Burbidge*.

Stipites 1–3-pollicares. *Lamina* 3–6-pollicaris, 3–4 lin. lata. *Pinnæ* $1\frac{1}{2}$–2 lin. latæ.

This is one of the most interesting of the new ferns which were discovered in Borneo by Mr. F. W. Burbidge in 1878, when collecting for Mrs. Veitch. It has entirely the habit of the Andine genus *Jamesonia*.—J. G. Baker.

Fig. 1. Two fronds, *life size*. 2. Portion of frond. 3, 4. Single pinnæ. *Enlarged*.



J.Allen del.

Lindsaya jamesonioides, Baker.

Plate 1627.

LINDSAYA CRISPA, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Lindsayeæ.

Lindsaya crispa, *Baker in Journ. Bot.* 1879, p. 39; rhizomate breviter repente, stipitibus gracilibus stramineis nudis brevibus vel elongatis, frondibus lanceolatis simpliciter pinnatis membranaceis glabris, pinnis multijugis sessilibus verticaliter plicatis subcuneatis dimidiatis margine superiore irregulariter crenato margine inferiore recto integro, venis liberis flabellatis perspicuis, indusii valvis angustis rigidulis persistentibus valde crispatis.

Hab. North Borneo, *Burbidge*.

Stipites 1–9 poll. *Lamina* 3–6-pollicaris, 6–9 lin. lata, pinnis infimis haud reductis. *Pinnæ* 3–4 lin. longæ, basi $1\frac{1}{2}$–2 lin. latæ.

This also is one of Mr. Burbidge's discoveries in North Borneo. In habit it most resembles *A. caudatum* var. *Edgeworthii*. It is remarkable in the genus for its very crisped pinnæ, with a very irregular upper margin.—J. G. Baker.

Fig. 1. A tuft of fronds, *life size*. 2, 3. Pinnæ, *enlarged*.

J Allen del

Lindsaya crispa, Baker.

PLATE 1628.

LINDSAYA LEPTOPHYLLA, *Baker.*

FILICES, Suborder POLYPODIACEÆ, Tribe LINDSAYEÆ.

Lindsaya leptophylla, *Baker in Journ. Bot.* 1884, p. 141; rhizomate filiformi longe repente epigæo paleis minutis lanceolatis membranaceis brunneis deciduis vestito, stipitibus gracilibus atro-castaneis elongatis nudis, frondibus lanceolatis simpliciter pinnatis membranaceis glabris, pinnis rhomboideis dimidiatis magnis laxe dispositis subsessilibus marginibus interioribus et inferioribus rectis integris reliquis profunde irregulariter lobatis, venis liberis flabellatis, soris linearibus valde interruptis, indusii valvis angustis chartaceis glabris.

HAB. North-east Madagascar, *Humblot*, 495.

Stipites semipedales. *Lamina* pedalis et ultra, 3–4 poll. lata. *Pinnæ* 1–2 poll. longæ.

A very distinct species, discovered lately, with several other curious novelties, by M. Humblot in his explorations of the tropical forests of the north-east of Madagascar.—J. G. BAKER.

Figs. 1, 2. Whole plant, *life size*. 3. Soriferous portion of edge of pinna, *enlarged*.

J.Allen del.

Lindsaya leptophylla, Baker.

Plate 1629.

LINDSAYA MADAGASCARIENSIS, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Lindsayeæ.

Lindsaya madagascariensis, *Baker in Journ. Linn. Soc.* vol. xvi. p. 198; rhizomate gracili epigæo longe repente paleis lanceolatis minutis brunneis crispatis furfuraceo, stipitibus elongatis gracilibus nudis deorsum castaneis sursum stramineis, frondibus deltoideis glabris 2–3-pinnatis, pinnis lanceolatis infimis maximis, pinnulis rhomboideis vel cuneatis integris margine exteriore irregulariter inciso-crenatis vel interdum profunde palmatim divisis, venis liberis flabellatis, indusii valva interiore intramarginali angusta persistente.

Hab. Damp woods of the central region of Madagascar, *Cameron*, *Helen Gilpin*, *Hildebrandt*, 4150.

Stipites 3–6-poll. longi. *Lamina* 4–6 poll. longa et lata. *Pinnæ* 4–6 lin. longæ.

Allied to the Tropical Asiatic *L. flabellulata*, Dryand., and the Brazilian *L. virescens*, Sw. Very variable in cutting, the type being simply bipinnate, another form with pinnules palmately cleft to the base, and a third decompound with final segments not more than half a line broad.—J. G. Baker.

Figs. 1, 2. Fronds of two forms, *life size*. 3, 4. Soriferous segments, *enlarged*.

J.Allen del.

Lindsaya madagascariensis Baker

Plate 1630.

ADIANTUM BALFOURII, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pteridеæ.

Adiantum Balfourii, *Baker in Proc. Royal Soc. Edinb. inedit.*; caudice breviter repente paleis parvis linearibus castaneis dense vestito, stipitibus contiguis elongatis castaneis nudis, frondibus lanceolatis glabris simpliciter pinnatis, pinnis 6–12-jugis brevissime petiolulatis oppositis orbiculatis basi integris late deltoideis vel truncatis margine exteriore leviter lobatis infimis haud reductis, venis liberis contiguis flabellatis, soris valde interruptis linearibus vel lineari-oblongis, indusio angusto glabro.

Hab. Mountains of the island of Socotra, *Balfour*, 198; *Schweinfurth*, 544, 774.

Stipites 4–6-pollicares. *Lamina* 4–8 poll. longa, 9–18 lin. lata. *Pinnæ* 6–12 lin. latæ.

This is the most remarkable new fern which was discovered during the recent exploration of the island of Socotra by Professor Isaac Balfour and Dr. Schweinfurth. It is nearest to *A. lunulatum*, but the pinnæ are opposite and nearly sessile.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. A pinna. 3. Portion of a pinna. *Both enlarged.*

J.Allen. del.

Adiantum Balfourii, Baker.

Plate 1631.

ADIANTUM GROSSUM, *Mett.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

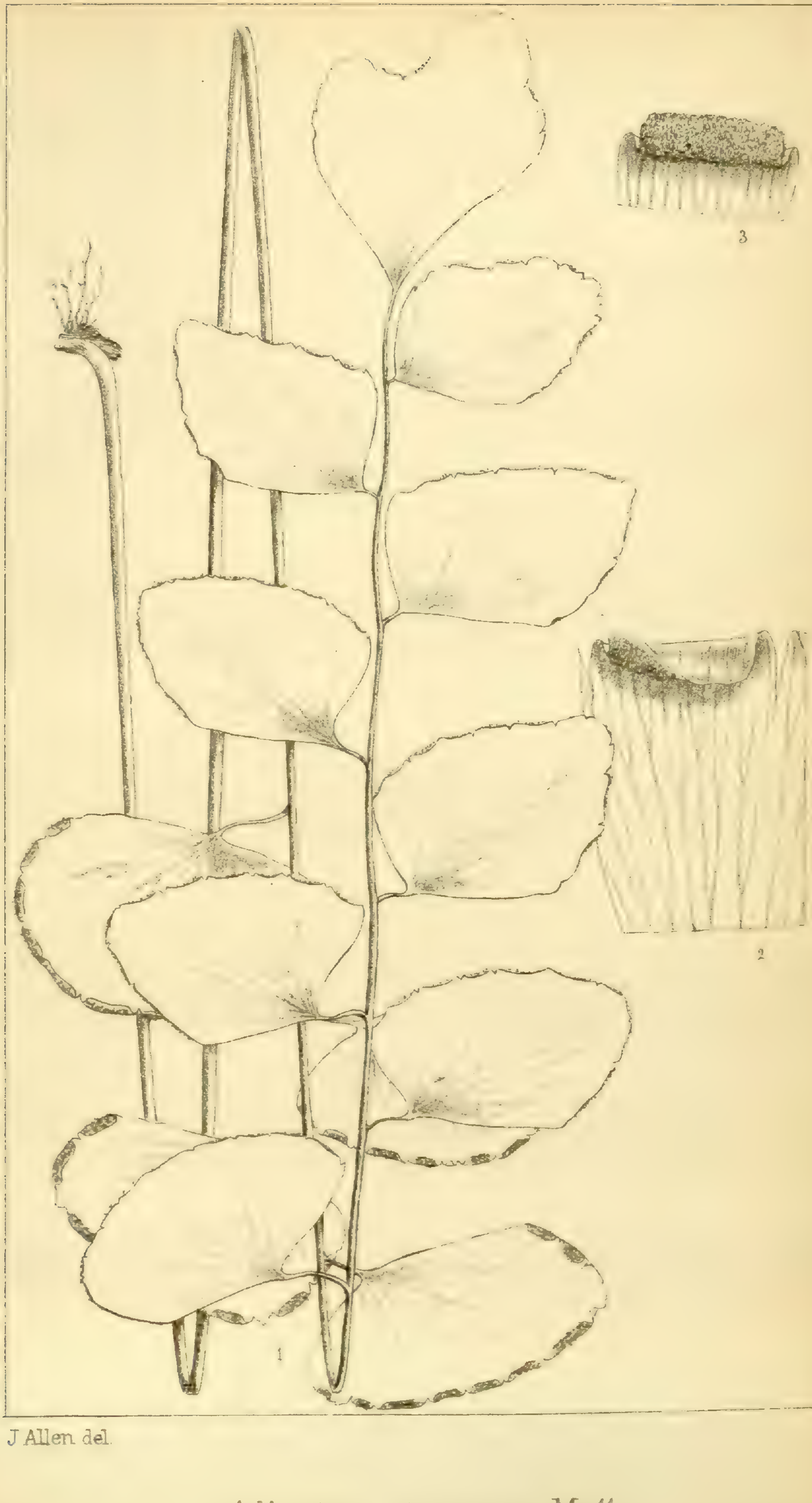
Adiantum grossum, *Mett. in Planch. et Triana, Prodr. Fl. Nov. Gran.* vol. ii. p. 296; rhizomate breviter repente paleis parvis brunneis linearisubulatis dense vestito, stipitibus elongatis nitidis nigris nudis, frondibus lanceolatis glabris simpliciter pinnatis, pinnis 7–12-jugis alternis magnis petiolatis superioribus rhomboideis inferioribus semi-orbiculatis basi integris margine superiore irregulariter inciso-crenatis, venis liberis flabellatis, soris linearibus valde interruptis, indusio angustissimo glabro.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 472.

Hab. Andes of New Granada, 3,500–7,000 ft., *Lindig*.

Stipites semipedales vel pedales. *Lamina* pedalis et ultra, $3\frac{1}{2}$–4 poll. lata. *Petioli* supremi brevissimi, infimi 6–8 lin. longi.

This is a very distinct species, nearest to the simply pinnate form of *A. peruvianum*, which has not yet been introduced into cultivation.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2, 3. Soriferous portion of a pinna, *enlarged*.



J Allen del.

Adiantum grossum, Mett.

Plate 1632.

ADIANTUM GRAVESII, *Hance*.

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Adiantum Gravesii, *Hance in Journ. Bot.* 1875, p. 197; caudice erecto paleis minutis apice vestito, stipitibus cæspitosis gracillimis nigris nudis, frondibus lanceolatis simpliciter pinnatis glabris, pinnis 4–7-jugis petiolatis ascendentibus cuneatis æquilateralibus apice late emarginatis, venis liberis flabellatis, soro solitario in pinnarum sinu apicali imposito, indusio lato glabro lineari vel lineari-oblongo.

Adiantum Mariesii, *Baker in Gard. Chron.* N.S. vol. xiv. p. 494.

Hab. China; banks of the North river, province of Canton, *Rev. J. Lamont* (*Hance*, 18831); Ichang gorge, *Maries*.

Stipites 1–1½ poll. longi. *Lamina* 1–2½ poll. longa, 4–6 lin. lata. *Pinnæ* 2 lin. latæ, petiolis 1½–2 lin. longis.

This tiny new *Adiantum* combines the segments of *A. monochlamys* with the habit of the dwarf varieties of *A. lunulatum*.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2, 3. Pinnæ. 4. Sorus and indusium. *Enlarged*.

J.Allen del.

Adiantum Gravesii, Hance.

Plate 1633.

ADIANTUM MONOSORUM, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Adiantum monosorum, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 472; stipitibus cum rachibus atro-castaneis nudis nitidis, frondibus firmis glabris deltoideis bipinnatis, pinnis lanceolatis infimis maximis basi postice furcatis, pinnulis rhomboideis multijugis petiolatis contiguis apice obtusis marginibus interioribus et inferioribus integris reliquis denticulatis, venis liberis flabellatis, soris solitariis ad pinnularum marginem superiorem impositis, indusio firmo persistente orbiculari vel oblongo-reniformi.

Hab. New Caledonia, *Herb. Macleay*.

Stipites 3–4 poll. longi. *Lamina* 6–8 poll. longa, pinnulis 20–25-jugis 3–4 lin. longis, petiolis castaneis ascendentibus $\frac{1}{2}$–1 lin. longis.

Allied to the well-known *A. affine* of New Zealand, but easily distinguished from all its allies by its solitary sori.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2. Pinnule. 3. Sorus. *Both enlarged*.

J.Allen del.

Adiantum monosorum, Baker.

Plate 1634.

ADIANTUM SERICEUM, *Eaton.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Adiantum sericeum, *Eaton in Bot. Zeit.* 1869, p. 361; caudice suberecto apice paleis membranaceis brunneis lineari-subulatis dense vestito, stipitibus gracilibus contiguis castaneis sursum cum rachibus dense pilosis, frondibus oblongo-lanceolatis sursum pinnatis deorsum bipinnatis utrinque pilosis, pinnis brevibus, pinnulis terminalibus cuneatis, lateralibus rhomboideis dimidiatis breviter petiolatis latere superiore basi auriculatis sterilibus margine inciso-crenatis, venis liberis flabellatis, soris linearibus, indusio angustissimo piloso.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 473.

Hab. Southern Cuba, banks of the river Curbani, near Trinidad, *Wright*, 3950.

Stipites 2–4-pollicares. *Lamina* pedalis et ultra, deorsum 2–3 poll. lata. *Pinnulæ* terminales 9–12 lin. latæ.

A very distinct species, easily recognised by the persistent hairiness of both its surfaces.—J. G. Baker.

Fig. 1. Whole plant 2. Pinna. *Both life size.* 3. Pinnule. 4. Sorus. *Both enlarged.*

2

3

J. Allen del

Adiantum sericeum, Eaton.

Plate 1635.

CHEILANTHES LIDGATII, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Cheilanthes Lidgatii, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 475; rhizomate repente, stipitibus nudis stramineis, frondibus deltoideis 2–3-pinnatis subcoriaceis glabris, pinnis superioribus lanceolatis, infimis maximis latere inferiore furcatis, segmentis oblongis contiguis adnatis sterilibus dentatis, venis liberis pinnatis venulis occultis furcatis, indusiis latis rigidis glabris oblongis segregatis vel confluentibus.

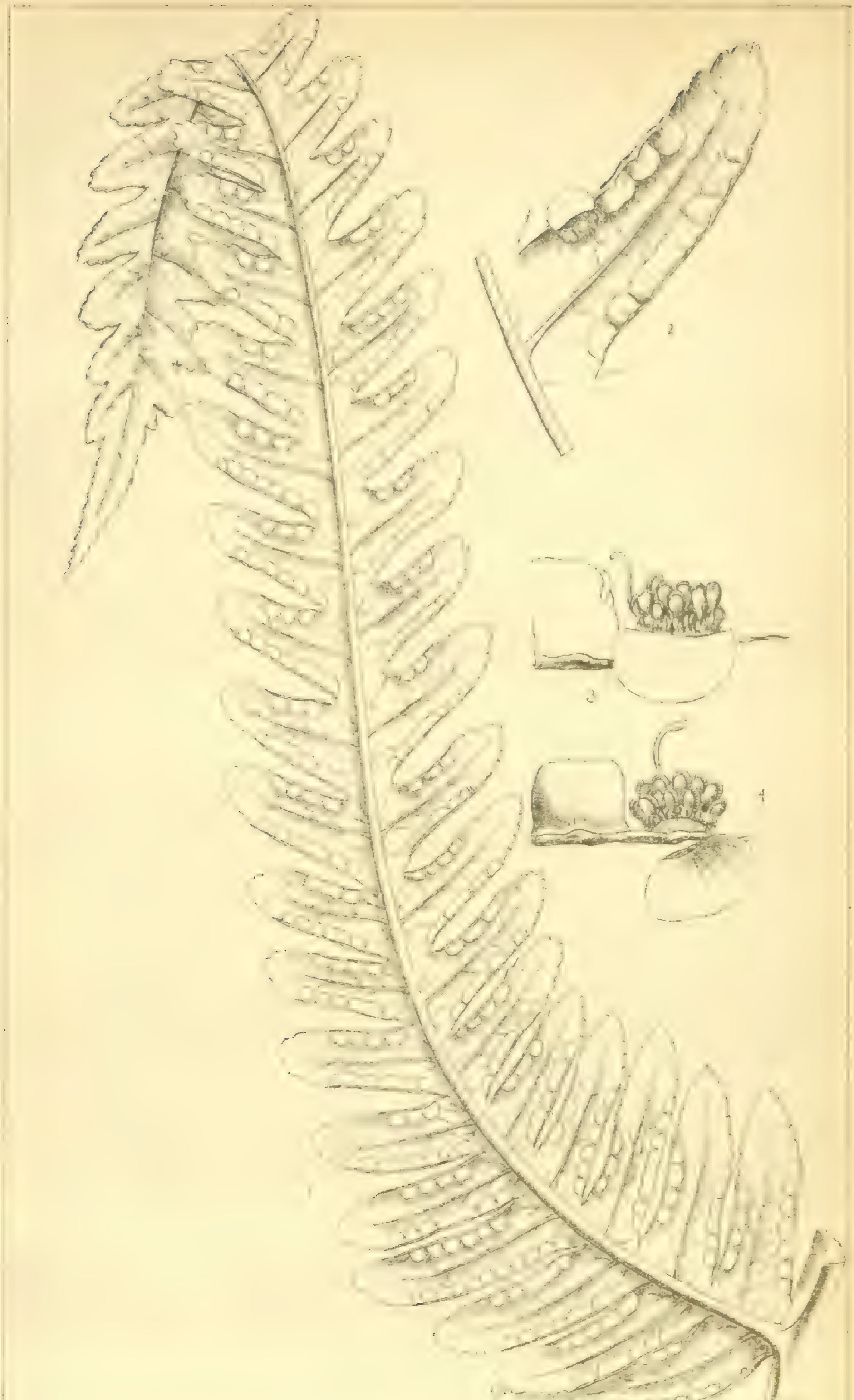
Schizopteris Lidgatii, *Hilleb. MSS.*

Hab. Sandwich Islands, mountains of Oahu, only two plants seen, *Hillebrand.*

Stipites pedales. *Lamina* 1½–2-pedalis, pinnis 18–21 lin. latis, segmentis ultimis 3 lin. latis.

This is totally different in habit from all the known species of *Cheilanthes,* and was regarded by its discoverer as the type of a new genus. —J. G. Baker.

Fig. 1. A central pinna, *life size.* 2. Final segment. 3, 4. Sori, with indusia. *Enlarged.*



J.Allen del

Chrysanthes Lindeyan. Baker

Plate 1636.

CHEILANTHES BOLUSII, *Baker*.

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Cheilanthes Bolusii, *Baker* (*sp. nov.*); rhizomate breviter repente paleis lanceolatis firmis nigris brunneo-marginatis patulis dense vestito, stipitibus elongatis cum rachibus atro-castaneis nitidis nudis, frondibus oblongo-lanceolatis 3–4-pinnatifidis rigidulis viridibus facie glabris dorso glandulosis, pinnis deltoideis ascendentibus laxe dispositis basi postice cuneato-truncatis infimis maximis, segmentis ultimis parvis incurvatis orbicularibus vel obovatis, venis pinnatis, indusio angusto glabro.

Hab. Cape Colony; south-western district on the banks of the Breede river at Darling bridge; *Bolus*, 2801. Gathered also by L. Kitching.

Stipites 3–8 poll. longi. *Lamina* 3–8 poll. longa, deorsum 1–2 poll. lata. *Pinnæ infimæ* 12–18 lin. longæ.

Allied to the Australian *C. Sieberi* and the Indian *C. bullosa*.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2, 3. Soriferous segments, *enlarged*.

J.Allen del.

Cheilanthes Bolusii, Baker.

Plate 1637.

CHEILANTHES AUREA, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Cheilanthes (Aleuritopteris) aurea, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 476; caudice erecto, stipitibus cæspitosis gracilibus castaneis deorsum paleis lanceolatis brunneis membranaceis vestitis, frondibus membranaceis deltoideis 3–4-pinnatis facie viridibus setosis dorso persistenter aureo-ceraceis, pinnis superioribus lanceolatis infimis maximis inæquilateralibus deltoideis postice productis, segmentis ultimis obovatis vel oblongis obtusis, venis liberis pinnato-flabellatis, indusiis latis glabris sæpissime confluentibus.—*Hemsley in Biol. Cent. Amer. Bot.* vol. iii. p. 613, tab. cvi. B.

Hab. Guatemala, Motagua valley, *Salvin and Godman.*

Stipites 1½–2 poll. longi. *Lamina* 3–4 poll. longa, segmentis ultimis 1–1½ lin. latis.

The only gold-ferns in the genus *Cheilanthes* are the Himalayan *C. chrysophylla*, Hook., and the Mexican *C. aurantiaca*, Moore. Neither of them has yet been brought into circulation.—J. G. Baker.

Fig. 1. Whole plant, *life size.* 2. Pinnule, showing upper surface. 3. Soriferous segments, under side. *Enlarged.*

J. Allen del,

Cheilanthes aurea, Baker.

PLATE 1638.

PELLÆA PEARCEI, *Baker.*

FILICES, Suborder POLYPODIACEÆ, Tribe PTERIDEÆ.

Pellæa Pearcei, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 476; caudice erecto, stipitibus cæspitosis nudis gracilibus castaneis deorsum paleis paucis lanceolatis sordide brunneis præditis, frondibus oblongo-lanceolatis bipinnatis membranaceis viridibus glabris, rachi primaria nuda castanea, pinnis sessilibus paucijugis deltoideis basi postice cuneato-truncatis infimis vix reductis, pinnulis oblongis integris adnatis, venis liberis pinnatis venulis erecto-patentibus furcatis, indusio continuo crenato glabro.

HAB. Andes of South Columbia; El Volcan, alt. 6,000 ft., *Pearce.*

Stipites 2–3 poll. longi. *Lamina* 2–3 poll. longa, 12–15 lin. lata, pinnulis $1\frac{1}{2}$–2 lin. latis.

Allied to the Californian *P. Breweri* and the Mexican *P. Seemanni.* —J. G. BAKER.

Fig. 1. Whole plant, *life size.* 2. Pinna. 3. Pinnule. 4. Sori, with indusium rolled back. *More or less enlarged.*

J.Allen del.

Pellæa Pearcei, Baker.

PLATE 1639.

PELLÆA KITCHINGII, *Baker*.

FILICES, Suborder POLYPODIACEÆ, Tribe PTERIDEÆ.

Pellæa Kitchingii, *Baker in Journ. Bot.* 1880, p. 327; rhizomate repente, paleis lanceolatis brunneis membranaceis dense vestito, stipitibus contiguis elongatis castaneis nudis, frondibus deltoideis tripinnatifidis crassis subcoriaceis viridibus glabris, pinnis inferioribus inæquilateralibus, infimis maximis deltoideis postice productis, segmentis ultimis lineari-oblongis obtusis, venis immersis occultis, indusio angusto firmulo continuo persistente.

Doryopteris Kitchingii, *Kuhn in Pl. Hilleb. Exsic.* No. 4163.

HAB. Central Madagascar; Betsileo land, *Kitching*, *Hillebrand*, 4163.

Stipites interdum pedales et ultra. *Lamina* 2–4 poll. longa, segmentis ultimis $1\frac{1}{2}$–2 lin. latis.

This is one of the most interesting and distinct of the new ferns discovered recently in Central Madagascar.—J. G. BAKER.

Fig. 1. Whole plant, *life size*. 2, 3. Apex of pinnæ. 4. Edge of fertile segment. *Enlarged*.

J Allen del.

Pellæa Kitchingii, Baker.

Plate 1640.

PTERIS PHANEROPHLEBIA, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Pteris (Eupteris) phanerophlebia, *Baker in Journ. Bot.* 1881, p. 367; caudice erecto paleis paucis minutis lanceolatis brunneis prædito, stipitibus cæspitosis elongatis castaneis nudis, frondibus membranaceis glabris viridibus simplicibus sagittatis auriculis elongatis acutis rarissime trifoliolatis, sterilibus margine denticulatis, venis pinnatis venulis ascendentibus furcatis liberis, soris continuis, indusio angusto glabro.

Hab. Central Madagascar, *Curtis*, 126; *Baron*, 2634; *Humblot*, 256.

Stipites 3–12 poll. longi. *Lamina* 6–8-pollicaris.
Allied in habit to the well-known Brazilian *P. sagittifolia*, Raddi, but the veining free.—J. G. Baker.

Figs. 1, 2, 3. Whole plants, *life size.* 4. Portion of fertile frond. 5. Portion of fertile frond, with indusium rolled back. *Both enlarged.*

J Allen del.

Pteris phanerophlebia, Baker.

Plate 1641.

PTERIS DECOMPOSITA, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

Pteris (Eupteris) decomposita, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 479; stipitibus elongatis castaneis nudis, frondibus amplis deltoideis decompositis viridibus glabris, rachibus castaneis parce muricatis, pinnis infimis maximis basi postice furcatis, segmentis ultimis segregatis adnatis ascendentibus lanceolatis interdum parvis uninerviis interdum majoribus venis pinnatis, soris continuis, indusio firmulo glabro persistente.

Hab. Peruvian Andes; Muna and Pozuzo, alt. 10,000 ft., *Pearce.*

Lamina 3–4-pedalis. *Pinnæ infimæ* 1–2-pedales.

This is one of the most interesting of the new ferns that were discovered by the late Mr. R. Pearce whilst travelling in South America on behalf of Messrs. Veitch. It is apparently tripartite, but it is very difficult to judge of the general habit of these large ferns from herbarium specimens. There is no previously known species to which it is nearly allied.—J. G. Baker.

Figs. 1, 2. Portions of frond, *life size.* 3. Fertile ultimate segments, *enlarged.*

J.Allen del

Pteris decomposita, Baker.

Plate 1642.

PTERIS DOMINICENSIS, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

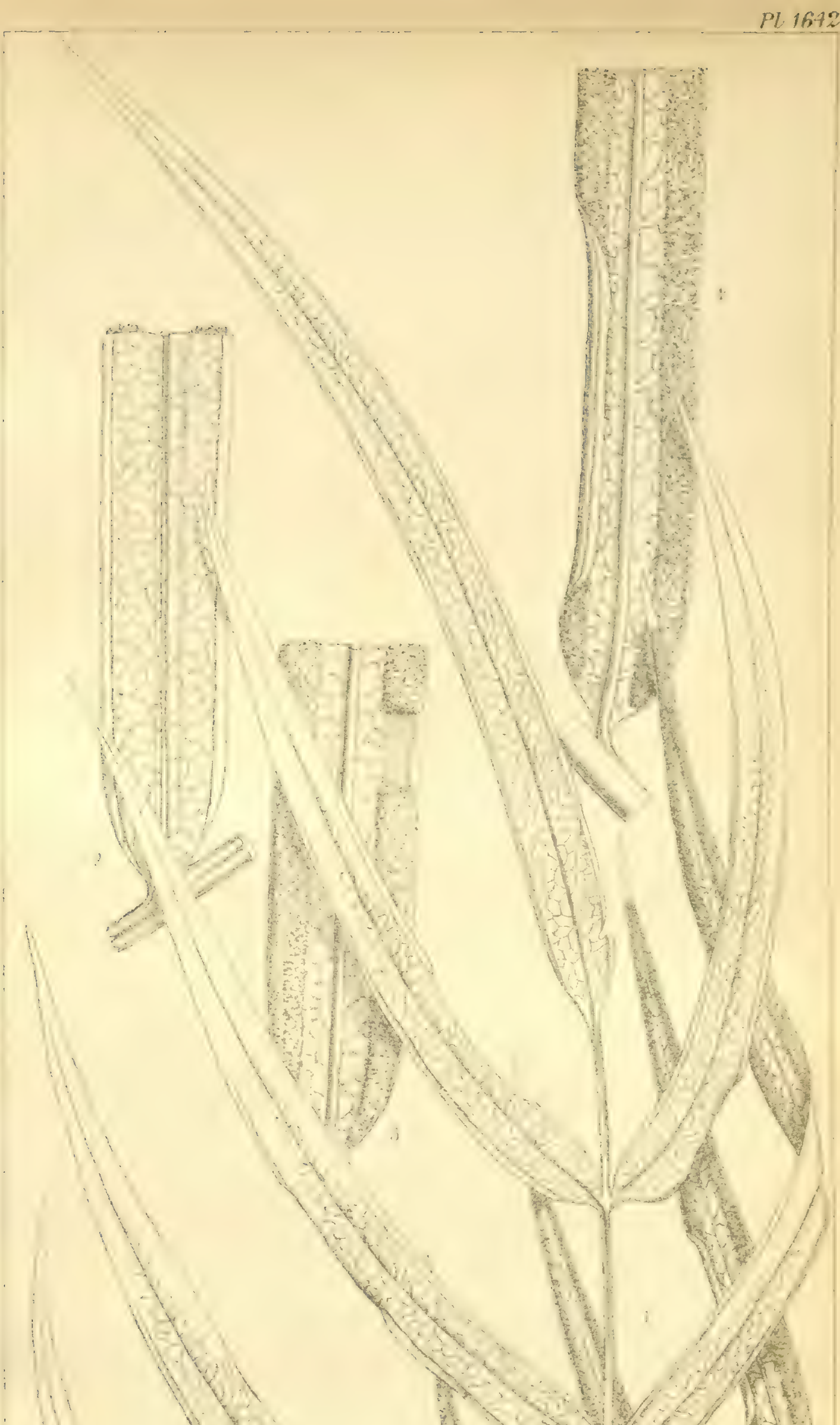
Pteris (Litobrochia) dominicensis, *Baker* (*sp. nov.*); stipitibus cum rachibus nudis stramineis, frondibus oblongo-lanceolatis simpliciter pinnatis modice firmis glabris viridibus, pinnis 17–19 linearibus acuminatis integris oppositis ascendentibus, superioribus sessilibus, inferioribus brevissime petiolatis, infimis haud reductis, venis in areolas hexagonas anastomosantibus, soris latis e basi ad pinnarum apicem continuis, indusio angustissimo glabro.

Hab. Dominica, *Baron Eggers*, 960.

Lamina bipedalis, 8–9 poll. lata. *Pinnæ* semipedales et ultra, 4–4½ lin. latæ.

Habit of *P. longifolia*, from which it differs by its anastomosing veins and very broad sori.—J. G. Baker.

Fig. 1. Portion of frond, *life size*. 2, 3, 4. Portions of pinnæ, *enlarged*.



J. Allen del.

Pteris dominii.

Plate 1643.

LOMARIA BIFORMIS, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

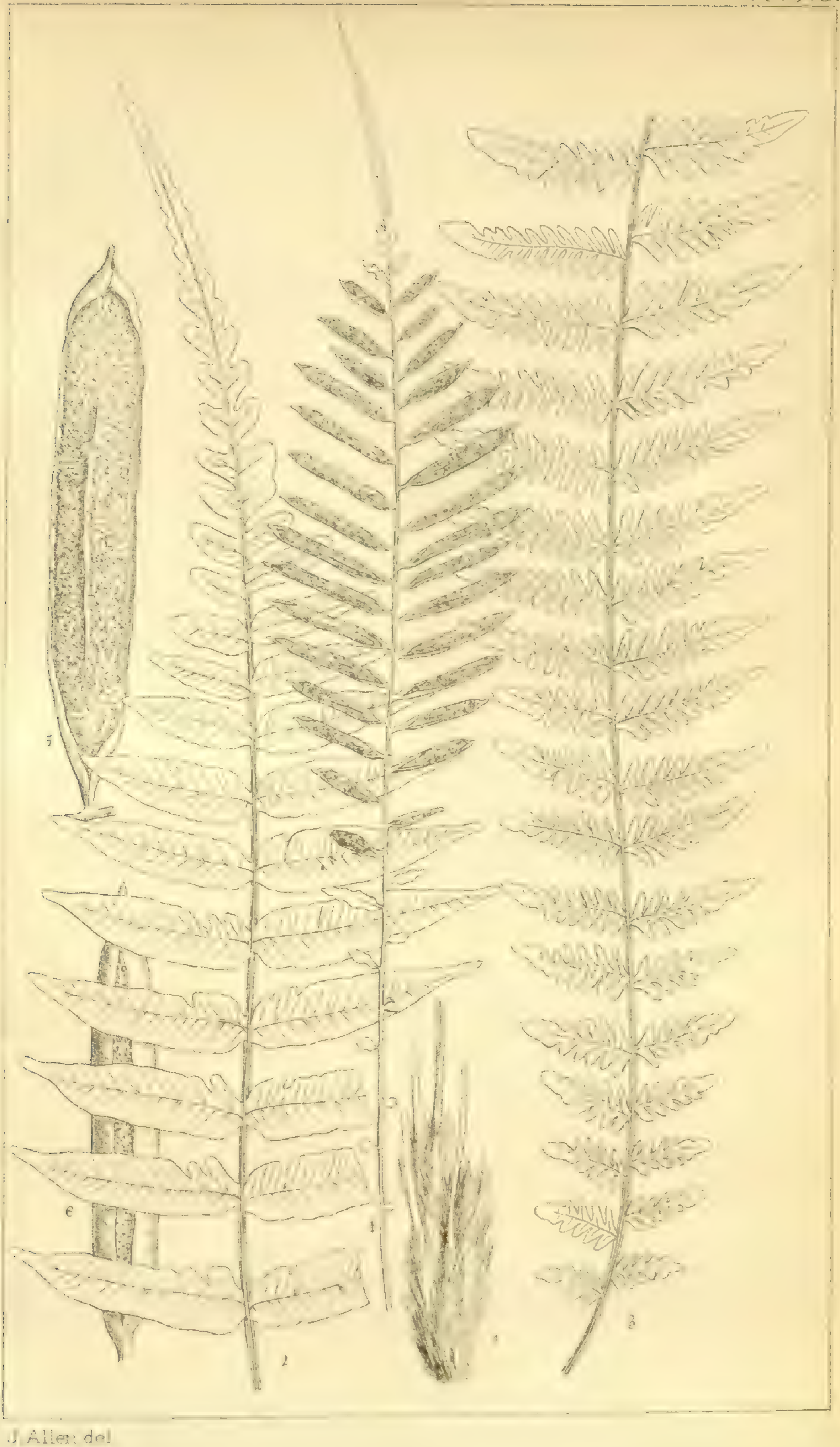
Lomaria biformis, *Baker in Journ. Linn. Soc.* vol. xv. p. 415; rhizomate crasso scandente paleis membranaceis lineari-subulatis brunneis dense vestito, stipitibus brevibus stramineis vel castaneis, frondibus sterilibus biformibus lanceolatis firmulis glabris viridibus basi sensim reductis simpliciter pinnatis, pinnis multijugis sessilibus lanceolatis obscure crenatis venis pinnatis, venulis erecto-patentibus furcatis, vel bipinnatis pinnis ad costam pinnatis pinnulis permultis contiguis parallelis lineari-oblongis obtusis uninerviis, frondibus fertilibus pinnatis, pinnis linearibus integris.

Hab. Forests of Central Madagascar, *Meller*, *Pool*, *Kitching*, *Miss Gilpin*, *Miss H. Baker*, *Baron*, 2645, *Humblot*, 543.

Lamina sterilis sæpe pedalis et ultra, pinnis centralibus $1\frac{1}{2}$-$2\frac{1}{2}$ poll. longis, 3–4 lin. latis. *Pinnæ fertiles* 1 lin. latæ.

One of the most interesting of the new ferns found lately in Central Madagascar, remarkable for the great variety in the cutting of the barren fronds.—J. G. Baker.

Fig. 1. Base of stipes. 2, 3. Barren fronds. 4. Fertile frond. *All life size.* 5, 6. Pinna of fertile frond, *enlarged*.



J. Allen del

Tectaria fallaciosa. Baker.

Plate 1644.

LOMARIA CONCINNA, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Pterideæ.

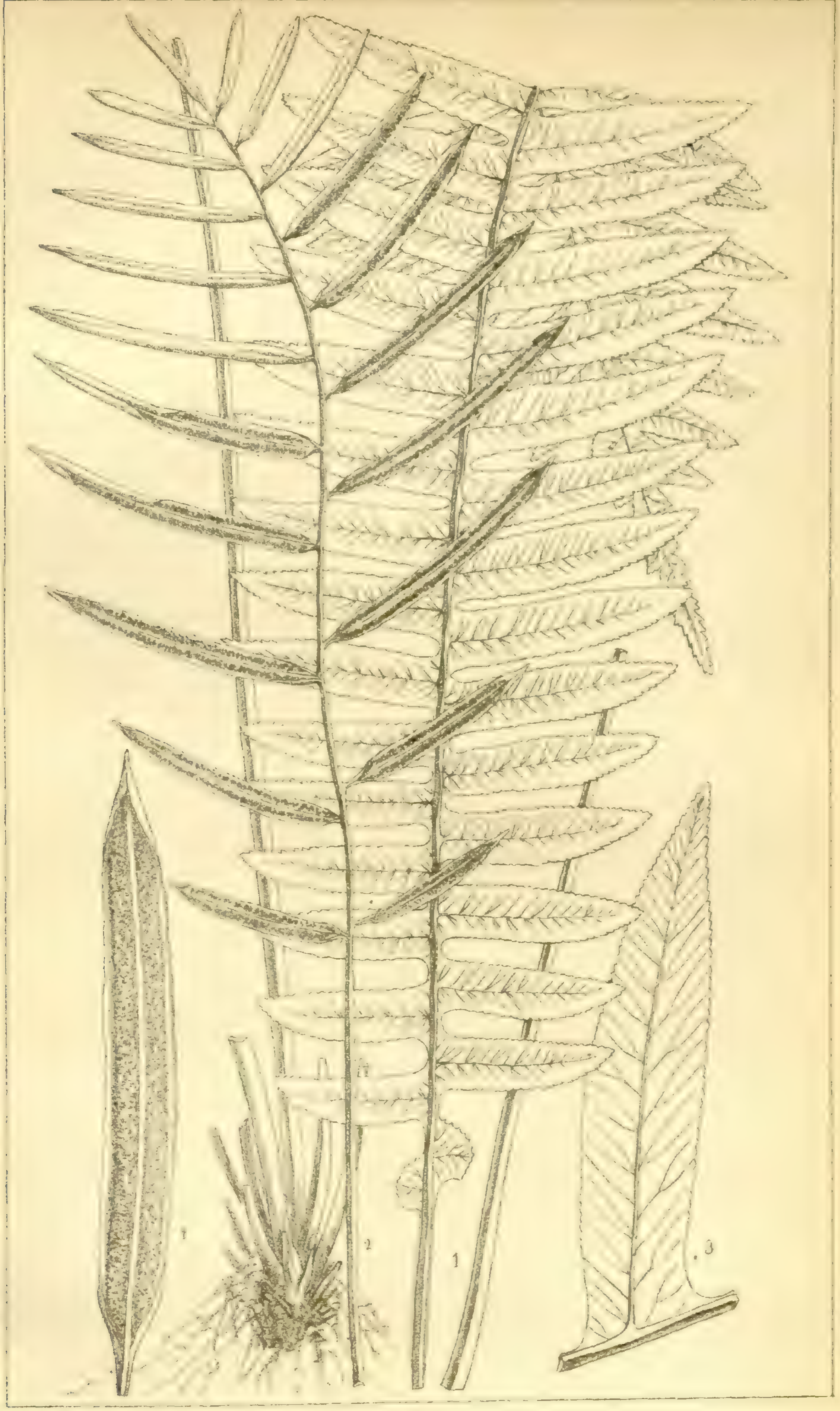
Lomaria concinna, *Baker in Journ. Bot.* 1885, p. 103 ; caudice erecto, stipitibus elongatis nudis, frondibus sterilibus oblongo-lanceolatis simpliciter pinnatis membranaceis glabris viridibus, pinnis lanceolatis acutis multijugis contiguis late adnatis denticulatis inferioribus reductis, venis pinnatis, venulis laxe dispositis multijugis erecto-patentibus furcatis, frondibus fertilibus pinnis linearibus, stipitibus multo longioribus.

Hab. Formosa ; Tamsui district, *Hancock*, 39.

Lamina sterilis 9–10-pollicaris, 2½–3 poll. lata, stipite 3–4-pollicari. *Lamina fertilis* 4–5-pollicaris, pinnis segregatis, stipite 8–9-pollicari.

This is one of the new ferns discovered lately by Mr. W. Hancock in Formosa. It is most nearly allied to the Central American *L. semicordata*, Baker.—J. G. Baker.

Fig. 1. Sterile frond. 2. Fertile frond. *Both life size.* 3. Sterile pinna. 4. Fertile pinna. *Both enlarged.*



J. Allen del.

Lomaria concinna, Baker.

Plate 1645.

ASPLENIUM POOLII, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Aspleniæ.

Asplenium (Euasplenium) Poolii, *Baker in Journ. Linn. Soc.* vol. xv. p. 416; caudice erecto, paleis subnullis, stipitibus nudis viridibus elongatis, frondibus oblongo-lanceolatis simpliciter viridibus glabris, pinnis 5–11 lanceolatis ascendentibus acuminatis irregulariter crenulatis sessilibus vel brevissime petiolatis apice sæpissime proliferis basi subæqualiter angustatis, venis pinnatis venulis ascendentibus simplicibus vel furcatis, soris medialibus elongatis, indusio membranaceo glabro.

Hab. Damp forests of Central Madagascar, *Pool*, *Kitching*, *Hildebrandt*, 3775, 4137.

Stipites 3–6 poll. longi. *Lamina* semipedalis vel pedalis, pinnis medio 2–8 lin. latis, centralibus interdum semipedalibus.

Allied to the Indian *A. Wightianum*, Wall., the Malayan *A. salignum*, Blume, and the Polynesian *A. Carruthersii*, Baker.—J. G. Baker.

Fig. 1. Apex of frond, showing proliferous pinnæ. 2, 3. Fertile pinnæ. *All life size.*

J.Allen del.

Asplenium Poolii, Baker.

Plate 1646.

ASPLENIUM MACROPHLEBIUM, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Aspleniæ.

Asplenium (Euasplenium) macrophlebium, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 485 ; rhizomate breviter repente paleis ovatis brunneis membranaceis dense vestito, stipitibus contiguis elongatis viridibus deorsum parce paleaceis, frondibus oblongo-lanceolatis simpliciter pinnatis glabris viridibus pinnis multijugis sessilibus lanceolatis obtusis crenatis basi postice cuneato-truncatis, infimis deflexis vix reductis, venis pinnatis venulis erecto-patentibus plerisque simplicibus infimis anticis furcatis, soris medialibus regulariter parallelis, indusio angusto glabro.

Hab. Fernando Po, alt. 2,000 ft., *Mann*, 338 ; Cameroon Mountains, *Kalbreyer*.

Stipites 3–5 poll. longi. *Lamina* 5–10 poll. longa, 2–2½ poll. lata, pinnis 5–6 lin. latis.

Intermediate between *A. tenerum*, Forst., and *A. lunulatum*, Swartz.

J. G. Baker.

Fig. 1. Whole plant, *life size.* 2 and 3. Pinnæ. 4. Portion of pinna. *All more or less enlarged.*

J.Allen del.

Asplenium macrophlebium, Baker.

Plate 1647.

ASPLENIUM MICROPTERON, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Aspleniæ.

Asplenium (Euasplenium) micropteron, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 488; caudice erecto, paleis lanceolatis membranaceis clathratis nigrescentibus, stipitibus brevissimis castaneis cæspitosis, frondibus lanceolatis bipinnatifidis firmulis glabris viridibus apice sæpissime caudatis radicantibus, pinnis multijugis sessilibus lanceolatis basi postice cuneato-truncatis deorsum profunde sursum leviter pinnatifidis, pinnulis infimis anticis cuneatis, venis liberis ascendentibus, soris medialibus, indusio lato glabro.

Hab. San Luis, alt. 7,000 ft., *Pearce*; Paraguay, cascade of Mbatobi, &c., *Balansa*, 344, 2900.

Lamina 3–6-pollicaris, cauda terminali 1–1½-pollicari, pinnis 2 lin. latis.

Closely allied to the well-known Old World *A. fontanum*, Bernh.—J. G. Baker.

Fig. 1. Whole plant, *life size*. 2, 3, 4. Pinnæ, *more or less enlarged*.

J. Allen del.

Asplenium micropteron, Baker.

Plate 1648.

ASPLENIUM GLENNIEI, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Aspleniæ.

Asplenium (Euasplenium) Glenniei, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 488 ; caudice erecto, paleis basalibus linearibus rigidulis castaneis, stipitibus cæspitosis brevibus castaneis, frondibus lanceolatis 2–3-pinnatifidis glabris viridibus apice haud radicantibus, rachi primaria deorsum castanea sursum viridula, pinnis sessilibus lanceolatis obtusis basi postice cuneato-truncatis deorsum profunde pinnatifidis inferioribus sensim reductis, pinnulis basalibus rhomboideis, venis liberis pinnatis, soris medialibus oblongis, indusio glabro.—*Eaton in Bullet. Torrey Club*, 1883, p. 29.

Athyrium gracile, *Fourn. Fil. Mex.* p. 102.

Asplenium (Athyrium) gracile, *Hemsl. in Biol. Cent. Amer.* vol. iii. p. 634, non *Fée.*

Hab. Mexico, *Glennie*; Rochers da Pedragal, valley of Mexico, *Bourgeau*, 252; Huachuca mountains, Arizona, *Lemmon.*

Stipites 6–12 lin. longi. *Lamina* 3–4-pollicaris, medio 12–15 lin. lata, pinnis $1\frac{1}{2}$–2 lin. latis.

Closely allied to the last and *A. fontanum*, Bernh. It is the Mexican plant mentioned under *A. fontanum* in 'Synopsis Filicum,' p. 216.—J. G. Baker.

Fig. 1. Whole plant, *life size.* 2, 3. Pinnæ, *enlarged.*

J. Allen del.

Asplenium Glenniei, Baker.

Plate 1649.

ASPLENIUM PTERIDOIDES, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Aspleniæ.

Asplenium (Darea) pteridoides, *Baker in Journ. Bot.* 1873, p. 17; caudice erecto, paleis basalibus lanceolatis nigrescentibus, stipitibus brevibus viridibus nudis, frondibus oblongis glabris viridibus bipinnatifidis vel bipinnatis, pinnis lanceolatis vel deltoideis, pinnulis inferioribus rhomboideis superioribus lanceolatis, venis liberis ascendentibus, soris marginalibus, indusio angusto glabro.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 488; *Benth. Fl. Austral.* vol. vii. p. 749.

Hab. Lord Howe's Island on Mount Gower, *C. Moore, Fullagar.*

Stipites 3–4 poll. longi. *Lamina* semipedalis–sesquipedalis, medio 3–6 poll. lata.

This is one of the curious new ferns that were discovered during the recent exploration for the first time of Lord Howe's Island. It is very variable both in shape and cutting.—J. G. Baker.

Figs. 1, 2, 3. Portions of frond, *life size.* 4. Fertile segment, *enlarged.*

J Allen del.

Asplenium pteridoides, Baker.

Plate 1650.

ASPLENIUM PORPHYRORACHIS, *Baker.*

Filices, Suborder Polypodiaceæ, Tribe Aspleniæ.

Asplenium (Diplazium) porphyrorachis, *Baker in Journ. Bot.* 1879, p. 40; caudice erecto, stipitibus cæspitosis elongatis castaneo-ebeneis paleis lineari-subulatis nigrescentibus sæpissime præditis, frondibus lanceolatis rigidulis glabris subpinnatis, pinnis multijugis contiguis lineari-oblongis obtusis subintegris basi confluentibus inferioribus sensim reductis, venis pinnatis venulis erecto-patentibus furcatis, soris medialibus elongatis infimis diplazioideis, indusio angusto glabro.

Asplenium zeylanicum, *Cesati, Fil. Born.* p. 21, non *Hook.*

Polypodium subserratum, *Hook. Sp. Fil.* vol. iv. p. 202; *Hook. et Baker, Syn. Fil.* p. 325.

Hab. Forests of North Borneo, *Wallace, Beccari, Burbidge, Dr. Hose.* Also found lately in Perak by Dr. Hose, Bishop of Singapore and Sarawak.

Stipites 3–6 poll. longi. *Lamina* semipedalis vel pedalis, medio $1\frac{1}{2}$–3 poll. lata.

This was first found in a sterile state by Mr. A. R. Wallace, and supposed to be a *Polypodium.* The copious specimens more recently gathered show it to be a diplazioid *Asplenium* near *A. zeylanicum*, Hook.—J. G. Baker.

Fig. 1. Whole plant, *life size.* 2, 3. Fertile pinnæ, *enlarged.*

J. Allendael.

Asplenium porphyrorachis, Baker.

Plate 1651.

DIPLORA INTEGRIFOLIA, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Scolopendrieæ.

Diplora integrifolia, *Baker in Journ. Bot.* 1873, p. 235; rhizomate gracili nudo late repente, stipitibus brevibus nudis erectis basi articulatis, frondibus simplicibus lanceolatis glabris membranaceis subintegris acuminatis e medio ad basin sensim attenuatis, venis erecto-patentibus simplicibus vel furcatis, soris e costâ ad marginem productis.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 492.

Hab. Solomon Isles, *Mrs. Burnett.*

Stipites 9–12 lin. longi. *Lamina* subpedalis, medio 7–8 lin. lata.

The genus *Diplora* is allied to *Scolopendrium*, but the pairs of indusia, instead of springing from contiguous veins and meeting in the interspace, spring from both sides of the vein, and hide it till they burst.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. Portion of frond: *slightly enlarged.* 3. Portion of frond. 4. Sorus: *both much enlarged.*

J.Allen del

Diplora integrifolia, Baker.

Plate 1652.

TRIPHLEBIA PINNATA, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Scolopendrieæ.

Triphlebia pinnata, *Baker in Malesia*, vol. iii. p. 42; stipitibus nudis, frondibus magnis oblongo-deltoideis simpliciter pinnatis membranaceis glabris, pinnis paucijugis alternis sessilibus lanceolatis acuminatis integris basi æqualiter cuneatis, infimis haud reductis, venis gracilibus erecto-patentibus sæpissime furcatis, soris medialibus elongatis.

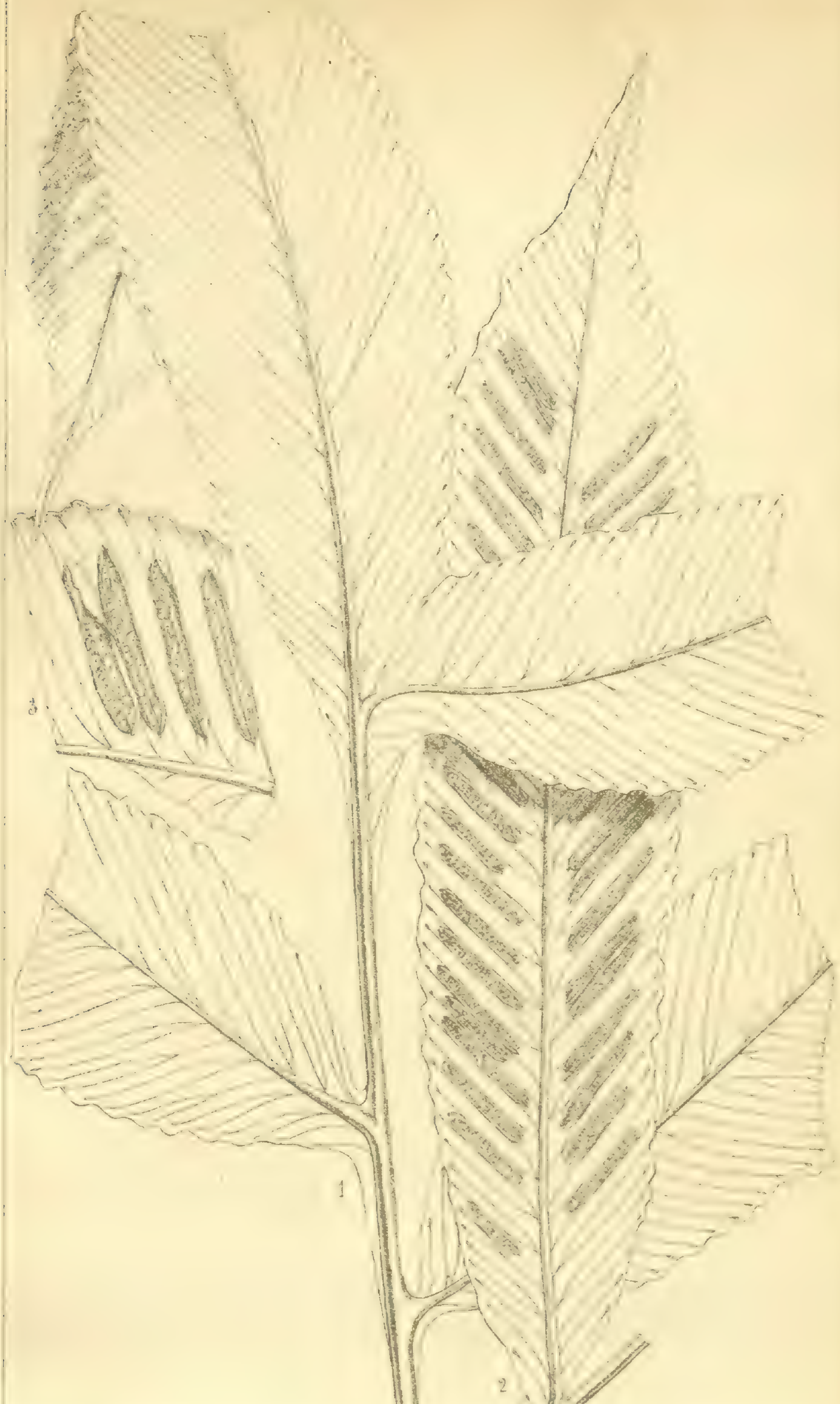
Scolopendrium pinnatum, *J. Sm.*; *Hook. Sp. Fil.* vol. iv. p. 2; *Hook. et Baker, Syn. Fil.* p. 247.

Hab. Philippines, South Camarines, *Cuming*, 187; Island of Leyte, *Cuming*, 311.

Caudex ignotus. *Lamina* pedalis vel sesquipedalis. *Pinnæ* semipedales et ultra, 15–18 lin. latæ. *Sori* 5–6 lin. longi.

This is selected mainly to illustrate the structure of the new genus *Triphlebia*, which was described lately in the *Malesia*, as above cited. Signor Beccari has discovered and figured two new species, and *Scolopendrium longifolium*, Presl., is a fourth.—J. G. Baker.

Figs. 1–2. Portions of frond: *life size.* 3. Portion of a fertile pinna: *enlarged.*



J.Allen del.

Triphlebia pinnata, Baker

Plate 1653.

SCOLOPENDRIUM BALANSÆ, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Scolopendrieæ.

Scolopendrium (**Antigramme**) **Balansæ**, *Baker* (*sp. nov.*); caudice erecto, stipitibus erectis inæqualibus dense cæspitosis paleis firmulis brunneis linearibus vel lanceolatis acuminatis præditis, frondibus simplicibus oblongo-lanceolatis integris membranaceis glabris basi truncatis vel deltoideis e medio ad apicem sensim attenuatis, venis gracilibus erecto-patentibus extrorsum in areolis hexagonis anastomosantibus, venulis inclusis nullis, soris medialibus valde inæqualibus.

Hab. Paraguay; granitic rocks of the Cerro San Tomar, near Paraguari, *Balansa*, 2885.

Stipites 1–5 poll. longi. *Lamina* 6–10-pollicaris, infra medium 2 poll. lata.

Nearly allied to the well-known Brazilian *Scolopendrium brasiliense*, Kunze.

Fig. 1. Tuft of fronds: *life size.* 2. Portion of frond, with sorus: *enlarged.*

J. Allen del.

Scolopendrium Balansæ Baker

Plate 1654.

ASPIDIUM MACLEAII, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

Aspidium (Polystichum) Macleaii, *Baker* (*sp. nov.*) ; caudice erecto, stipitibus elongatis cæspitosis prope basin paleis lanceolatis membranaceis ferrugineis dense vestitis, frondibus magnis oblongo-lanceolatis simpliciter pinnatis rigidulis glabris, pinnis multijugis sessilibus confertis lanceolatis acuminatis breviter pectinato-pinnatifidis basi antice auriculatis postice cuneato-truncatis, venis pinnatis venulis paucijugis liberis ascendentibus obscuris, soris medialibus uniseriatis vel irregulariter biseriatis, indusio parvo glabro subpersistente.

Hab. Transvaal, in damp valleys of the Drakensberg range, &c.; *McLea* (*Bolus* 3080), *Ayres* (*Sanderson*), *C. Mudd.*

Stipites pedales. *Lamina* $1\frac{1}{2}$–3-pedalis. *Pinnæ* 40–60-jugæ, centrales 4–7 poll. longæ, supra basin 5–6 lin. latæ; inferiores paulo breviores.

A very distinct new species from the South African goldfields, allied to the North-western American *A. munitum* and the Madeiran *A. falcinellum.*—J. G. Baker.

Fig. 1. Portion of plant. 2. Fertile pinnæ: *life size.* 3. Base of fertile pinna. 4. A single sorus, with indusium: *enlarged.*

1

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Plate 1655.

ASPIDIUM CRASPEDOSORUM, *Maxim.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

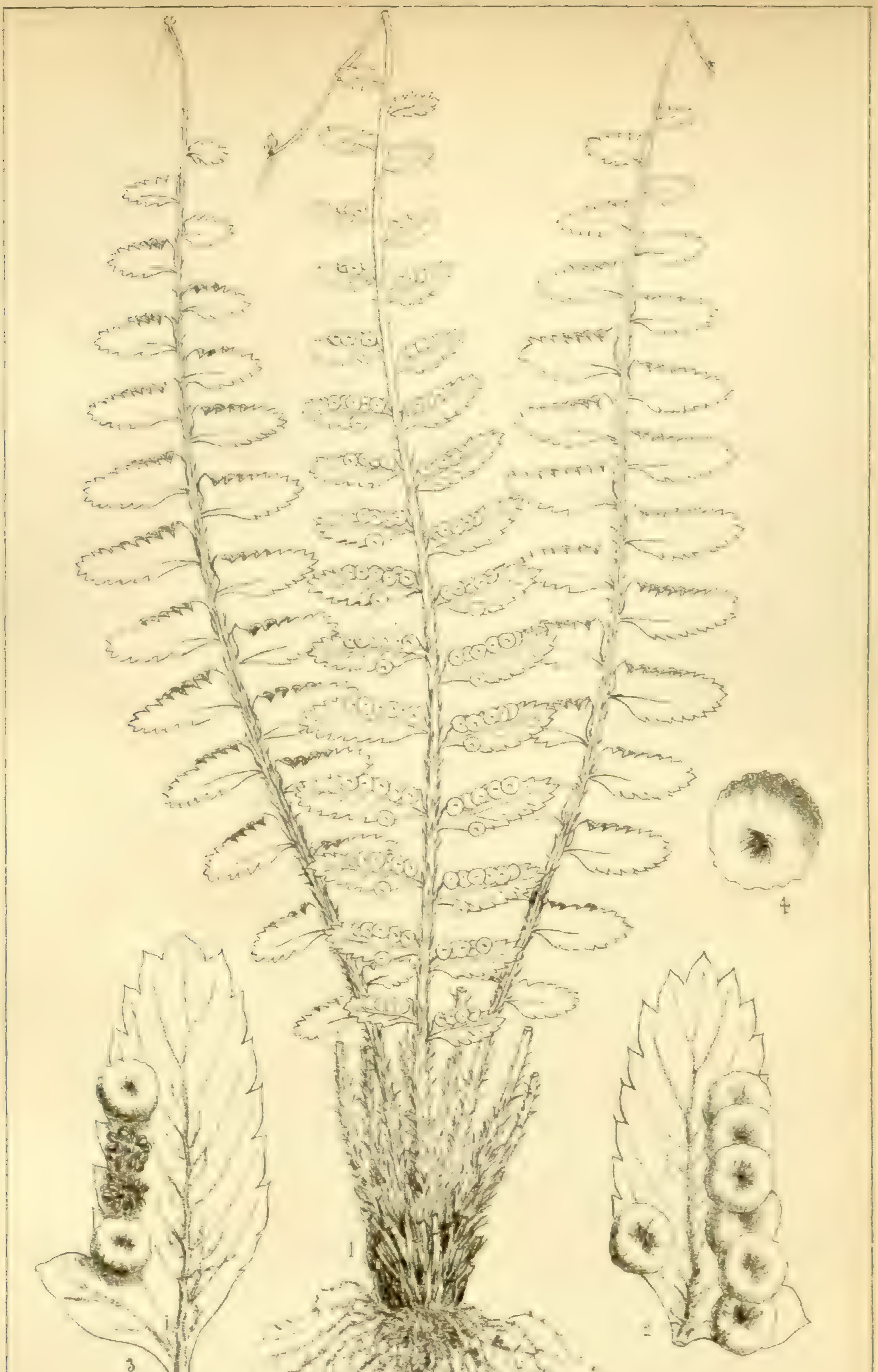
Aspidium (Polystichum) craspedosorum, *Maxim. Decad.* vii. p. 341; caudice erecto, stipitibus brevibus dense cæspitosis paleis lanceolatis membranaceis ferrugineis dense vestitis, frondibus parvis lanceolatis simpliciter pinnatis glabris apice sæpe radicantibus, pinnis sessilibus multijugis inæquilateraliter lanceolatis basi antice auriculatis postice cuneato-truncatis, inferioribus reflexis sensim minoribus, venis liberis obscuris erecto-patentibus, soris inter marginem et costam uniseriatis in pinnarum lateribus superioribus sæpe solum productis, indusio magno peltato persistente.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 492.

Hab. Japan, *Maximowicz, Tschonoski, Hope, Dickins, Maries*; South-eastern Manchuria, *Maximowicz*, 71; North China, *Ross, David* (2272), *Hance* (17013), *Webster*.

Stipites 1–2½ poll. longi. *Lamina* 3–6-pollicaris, medio 9–12 lin. lata.

A very distinct species, widely spread in North-eastern Asia, remarkable for its very large persistent bullate indusia.—J. G. Baker.

Fig. 1. Tuft of frond: *life size.* 2–3. Fertile pinnæ. 4. Indusium: *enlarged.*



J. Allen del.

Aspidium craspedosorum, Maxim.

Plate 1656.

ASPIDIUM BAKERIANUM, *Atkinson*.

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

Aspidium (Polystichum) Bakerianum, *Atkinson inedit.*; caudice erecto, stipitibus elongatis cæspitosis paleis magnis lanceolatis membranaceis ferrugineis vestitis, frondibus magnis oblongo-lanceolatis tripinnatifidis rachi prorsus paleaceo, pinnis multijugis sessilibus lanceolatis, inferioribus sensim minoribus deflexis, pinnulis sessilibus inæquilateraliter ovatis argute pinnatifidis basi postice cuneato-truncatis, venis pinnatis venulis ascendentibus, soris medialibus, indusio membranaceo glabro.

Aspidium Prescottianum, var. Bakeriana, *C. B. Clarke in Trans. Linn. Soc. Bot.* ii. ser. p. 510, tab. 66.

Hab. Temperate region of the Central and Eastern Himalayas, *Thomson, Strachey and Winterbottom, Edgeworth, Duthie, C. B. Clarke*, &c.

Stipites semipedales et ultra. *Lamina* sesquipedalis vel bipedalis, medio 6–10 poll. lata.

Intermediate between *A. Prescottianum*, Hook., and *A. angulare*, Swartz.—J. G. Baker.

Fig. 1. Apex of frond. 2. Tuft of stipes: *life size.* 3. Sterile pinnule: *enlarged.* 4. Fertile pinnule: *life size.* 5. The same: *enlarged.*

J Allen, del.

Aspidium Bakerianum, Atkins.

Plate 1657.

ASPIDIUM MULTIFIDUM, *Mett.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

Aspidium (Polystichum) multifidum, *Mett. in Fil. Lechler*, No. 3060; caudice erecto, stipitibus erectis cæspitosis deorsum paleis magnis patulis lanceolatis firmis brunneo-nigris dense vestitis, frondibus magnis oblongo-lanceolatis decompositis, rachi prorsus paleaceo, pinnis multijugis sessilibus lanceolatis inferioribus sensim minoribus reflexis, pinnulis inæquilateraliter ovatis basi postice cuneato-truncatis, segmentis tertiariis profunde flabellatim dissectis, venis obscuris, soris parvis, indusio glabro.—*Hook. Sp. Fil.* vol. iv. p. 35; *Hook. et Baker, Syn. Fil.* p. 256.

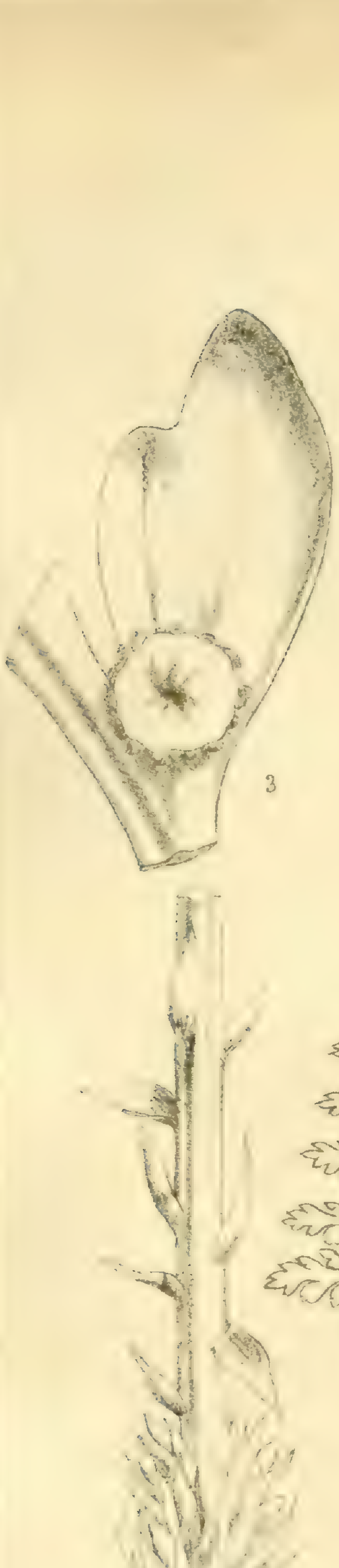
Polystichum Pearcei, *Philippi in Linnæa*, vol. xxiii. p. 305.

Hab. Chilian Andes; *Lechler, Downton, Pearce, Dr. R. O. Cunningham, &c.*

Stipites semipedales et ultra. *Lamina* sesquipedalis vel bipedalis, medio 6–10 poll. lata.

This is a very handsome plant, with the habit of *A. angulare*, but much more finely dissected.—J. G. Baker.

Fig. 1. Portion of frond: *life size.* 2. Pinnule: *enlarged.* 3. Fertile segment, with a single sorus: *enlarged.* 4. Base of stipes: *life size.*



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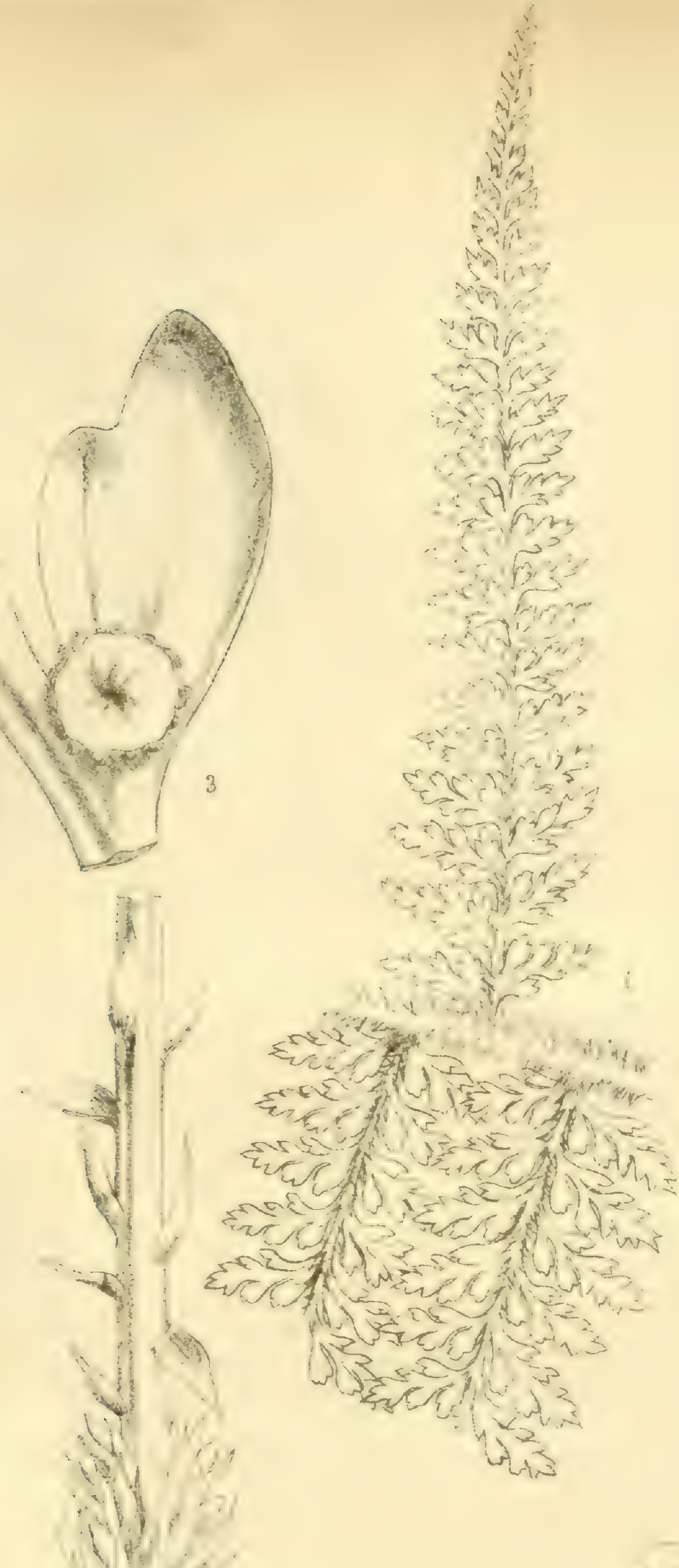

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J Allen del.

Aspidium multifidum, Mett.

Plate 1658.

NEPHRODIUM LONGICAULE, *Baker*.

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

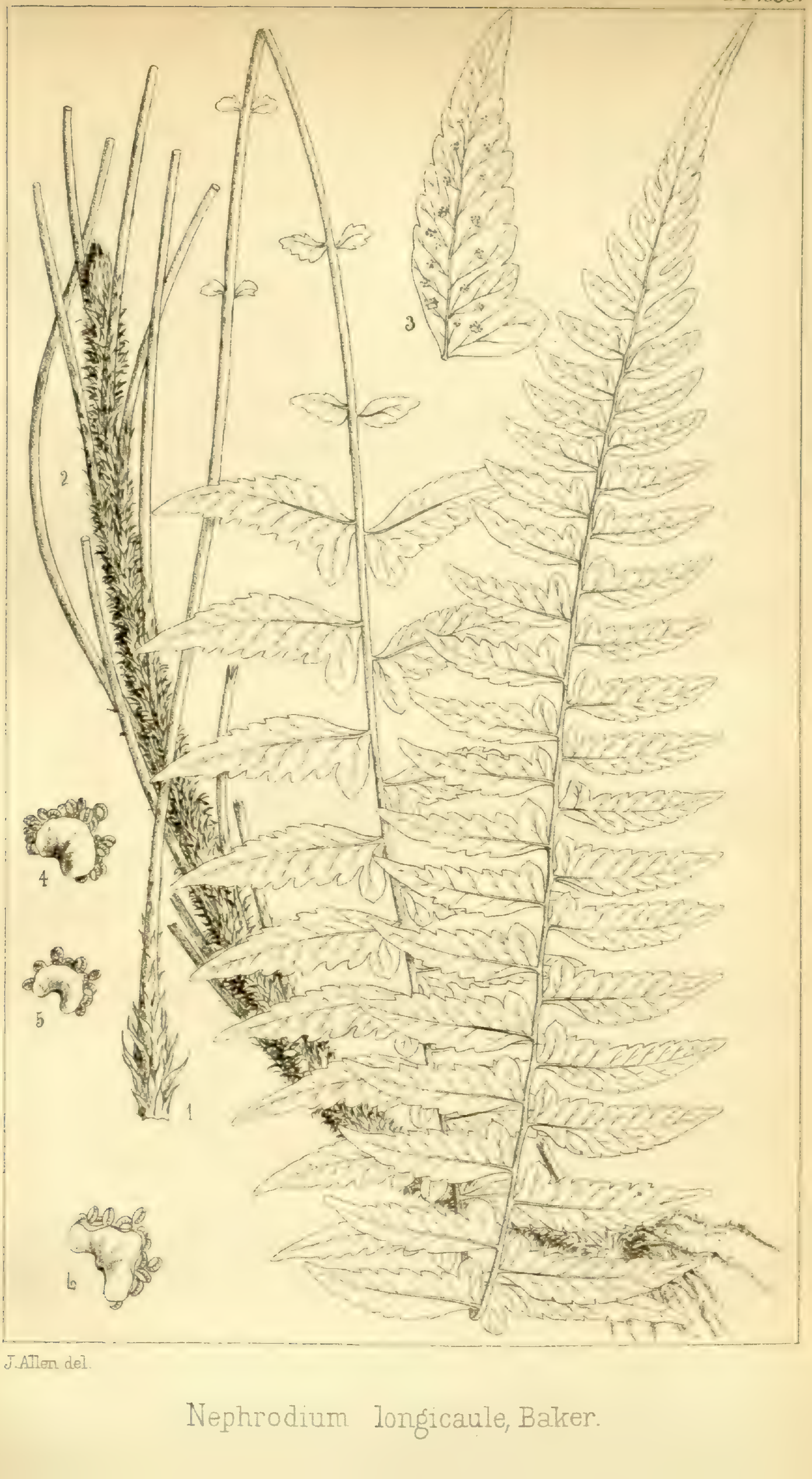
Nephrodium (Lastrea) longicaule, *Baker in Journ. Bot.* 1881, p. 204; caudice elongato decumbente paleis parvis firmis lanceolatis brunneis vestito, stipitibus segregatis gracilibus erectis nudis nitidis elongatis, frondibus lanceolatis glabris simpliciter pinnatis utrinque viridibus, rachi nudo stramineo, pinnis multijugis sessilibus inæquilateraliter lanceolatis breviter pinnatifidis, segmentis oblongis basi antice auriculatis postice truncatis, infimis remotis minutis, venis pinnatis, venulis paucijugis ascendentibus, soris parvis medialibus, indusio minuto glabro.

Hab. New Granada, mountains of the province of Antioquia, *Kalbreyer*, 1454.

Stipites semipedales et ultra. *Lamina* pedalis vel sesquipedalis, medio $1\frac{1}{2}$–2 poll. lata.

This very distinct species was discovered by Mr. Kalbreyer in 1880, when on a collecting expedition for Messrs. Veitch.—J. G. Baker.

Fig. 1. Entire frond. 2. Caudex, with base of stipes: *both life size.* 3. Central pinna. 4, 5, 6. Sori, with indusia: *both enlarged.*



J.Allen del.

Nephrodium longicaule, Baker.

Plate 1659.

NEPHRODIUM DICKINSII, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

Nephrodium (Lastrea) Dickinsii, *Baker*; caudice erecto, stipitibus elongatis cæspitosis prope basin paleis firmis lanceolatis nigro-brunneis dense vestitis, frondibus magnis oblongo-lanceolatis membranaceis glabris simpliciter pinnatis, rachi paleis linearibus atris copiosis prædito, pinnis lanceolatis multijugis sessilibus inciso-crenatis basi truncatis, inferioribus sensim minoribus, venis primariis venulis paucijugis ascendentibus, soris parvis medialibus, indusio parvo glabro.

Aspidium Dickinsii, *Franch. et Savat. Enum. Fl. Jap.* ii. pp. 236, 629.

Hab. Japan, *Maximowicz, Dickins, Bissett.*

Stipites 6–9 poll. longi. *Lamina* 1½–2-pedalis, medio 6–8 poll. lata. *Pinnæ* centrales 6–8 lin. latæ.

Allied to the common Indian *N. hirtipes*, Hook., and *N. cuspidatum*, Baker, and the Chinese *N. decipiens*. It was named after Mr. F. V. Dickins, now Assistant Secretary to the University of London, who whilst resident for many years in Japan paid special attention to ferns.—J. G. Baker.

Fig. 1. Apex of frond. 2. Base of stipes, with paleæ. 3. Central fertile pinna: *all life size.* 4. Portion of fertile pinna, showing sori and indusia: *enlarged.*

J Allen, del.

Nephrodium Dickieanum, Baker.

Plate 1660.

NEPHRODIUM SUBCRENULATUM, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

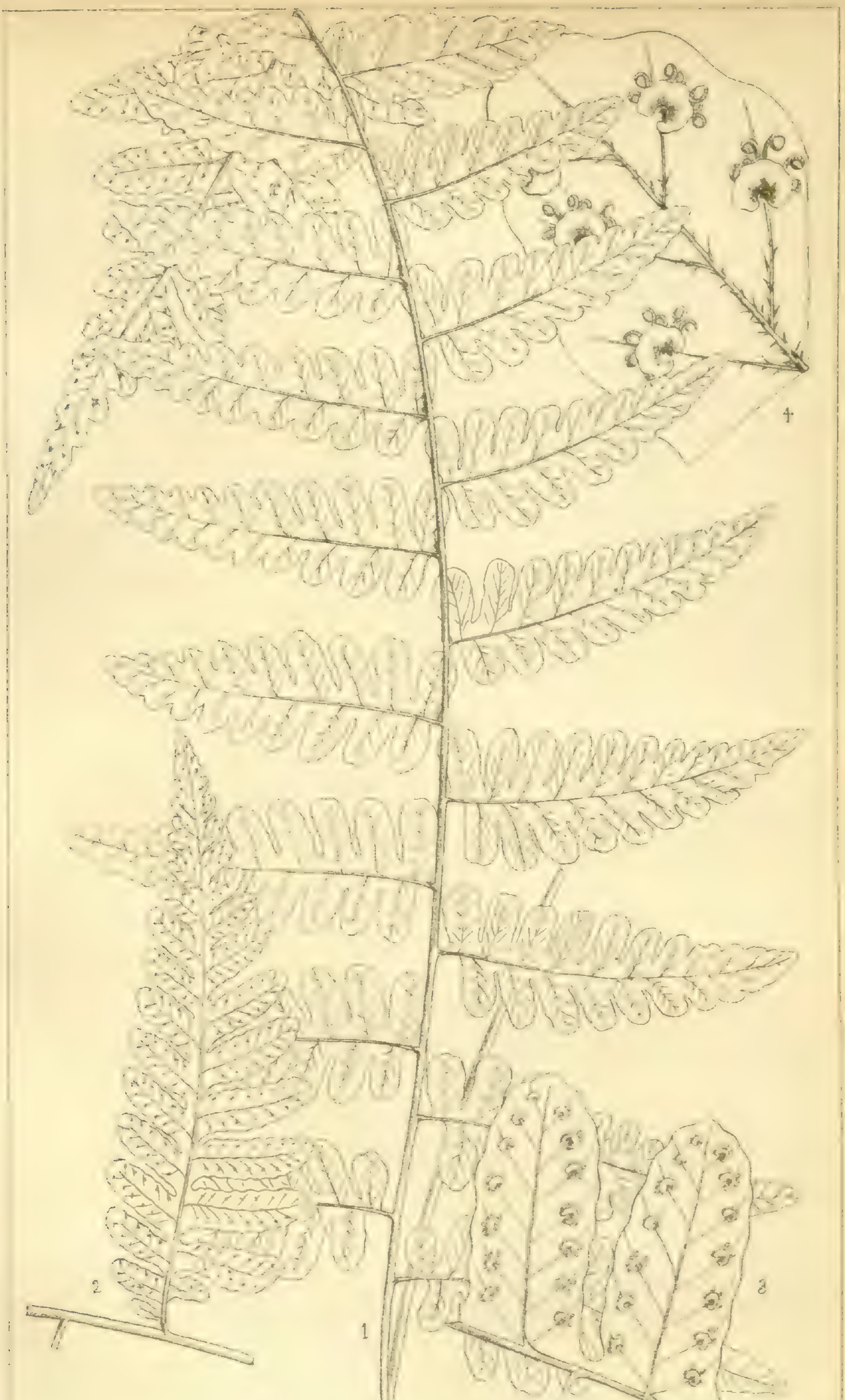
Nephrodium (Lastrea) subcrenulatum, *Baker in Journ. Linn. Soc.* vol. xvi. p. 202; stipitibus gracilibus nudis castaneis, frondibus membranaceis oblongo-lanceolatis profunde bipinnatifidis, rachi parce paleaceo, pinnis multijugis lanceolatis profunde pinnatifidis obscure petiolatis infimis maximis latere inferiori productis, pinnulis oblongis obtusis integris basi confluentibus, venis pinnatis obscure paleaceis, venulis perspicuis erecto-patentibus paucijugis sæpissime simplicibus, soris parvis supramedialibus, indusio parvo glabro.

Hab. Forests of Central Madagascar, *Miss Helen Gilpin.*

Caudex ignotus. *Stipites* completos haud vidi. *Lamina* subpedalis. *Pinnæ* centrales 8–9 lin. latæ.

This is one of the many new species discovered recently in Central Madagascar. It is allied to the Tropical American *N. chrysolobum.*—J. G. Baker.

Fig. 1. Whole frond. 2. Lower pinna: *both life size.* 3. Two fertile pinnules: *enlarged.* 4. Fertile pinnules: *more enlarged.*



Nephrodium subcrenulatum, Baker.

Plate 1661.

NEPHRODIUM PRENTICEI, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

Nephrodium (Lastrea) Prenticei, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 404; caudice erecto, stipitibus cæspitosis stramineis elongatis basi paleis brunneis lineari-subulatis dense vestitis, frondibus oblongo-lanceolatis firmulis viridibus profunde bipinnatifidis, rachi stramineo puberulo, pinnis sessilibus lanceolatis acuminatis ascendentibus basi attenuatis, infimis haud reductis, pinnulis lanceolatis contiguis falcatis, venulis multijugis erecto-patentibus simplicibus, soris parvis supramedialibus, indusio persistente ciliato.

Lastrea Prenticei, *Carruth. in Seem. Fl. Vit.* p. 359.

Hab. **Fiji isles**, *Horne*, 1003; *Milne*, 247.

Stipites semipedales et ultra. *Lamina* 1–2-pedalis. *Pinnæ* interdum semipedales.

A native of the Fiji isles, nearly allied to the widely-spread and variable Tropical Asian *N. calcaratum*, Hook.—J. G. Baker.

Fig. 1. Apex of frond. 2. Base of stipes: *both life size.* 3. Fertile pinnule: *enlarged.* 4. Portion of fertile pinna: *life size.* 5. Portion of pinnule, to show indusium: *much enlarged.*

J. Allen del.

Nephrodium Prenticei, Baker.

Plate 1662.

NEPHRODIUM BUCHANANI, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

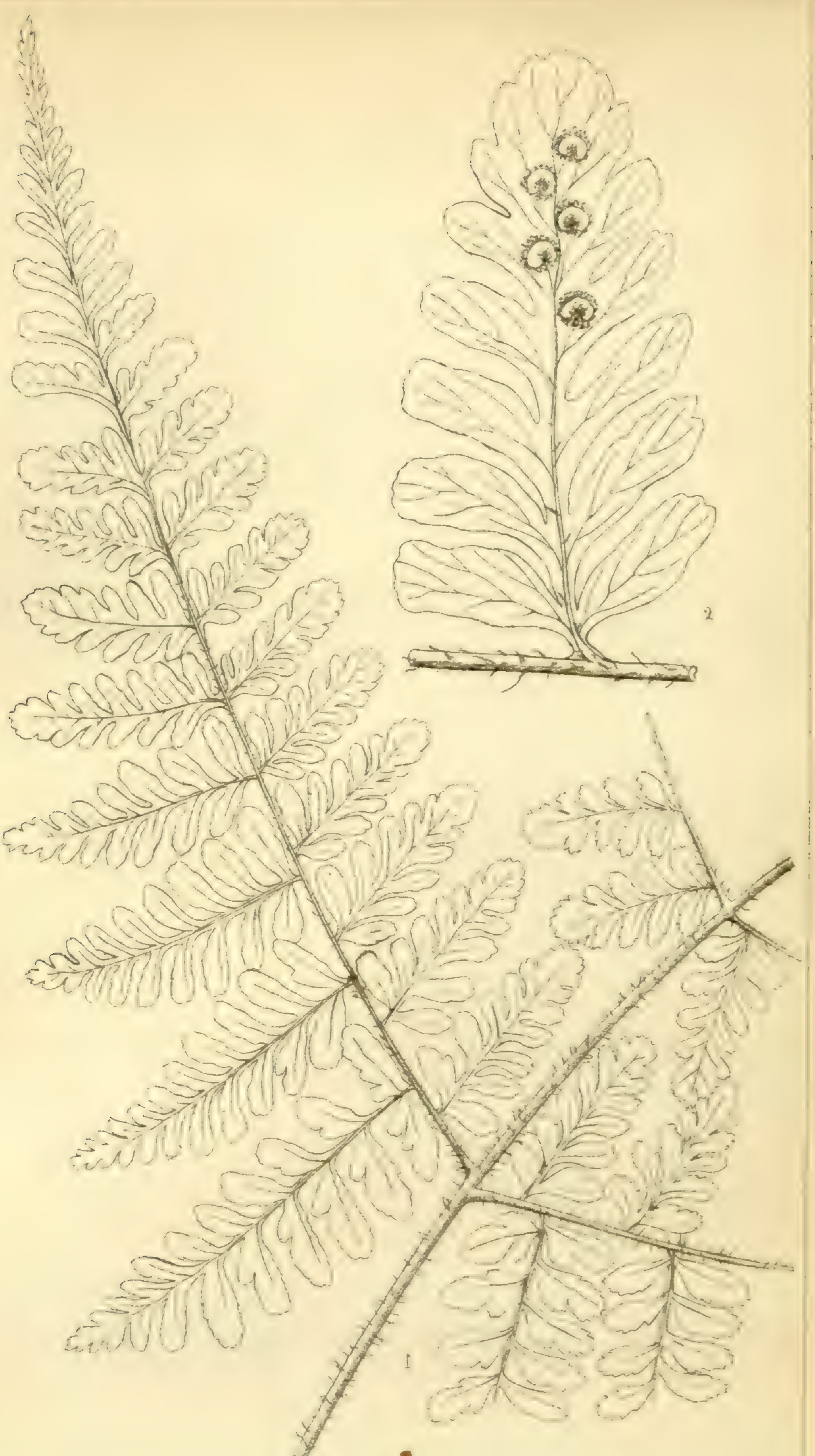
Nephrodium (Lastrea) Buchanani, *Baker in Hook. et Baker Syn. Fil.* edit. 2, p. 498; caudice erecto, stipitibus elongatis cæspitosis brunneo-stamineis paleis lineari-subulatis brunneis patulis vel squarrosis ad apicem præditis, frondibus magnis deltoideis decompositis rachi stramineo crinito, pinnis lanceolato-deltoideis infimis maximis latere inferiori productis, segmentis ultimis oblongis obtusis erecto-patentibus integris basi confluentibus, venis pinnatis venulis paucis ascendentibus inferioribus furcatis, soris subcostalibus, indusio glabro persistente.

Nephrodium eximium, *Cordemoy inedit.*
Lastrea crinita, *Boivin inedit.*

Hab. Nottingham Bush, Natal, alt. 4000–5000 ft., *Buchanan and McKen*; Transvaal, *McLea*; Bourbon, *Cordemoy, Delisle, Balfour*; Central Madagascar, *Helen Gilpin.*

Allied to the Cape *N. inæquale*, Hook., and the Indian peninsular *N. pulviniferum*, Baker (*Lastrea*, Beddome).—J. G. Baker.

Fig. 1. Portion of frond: *life size.* 2. Final segment: *enlarged.*



J. Allen del.

Nephrodium Buchanani, Baker.

Plate 1663.

NEPHRODIUM MAGNUM, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

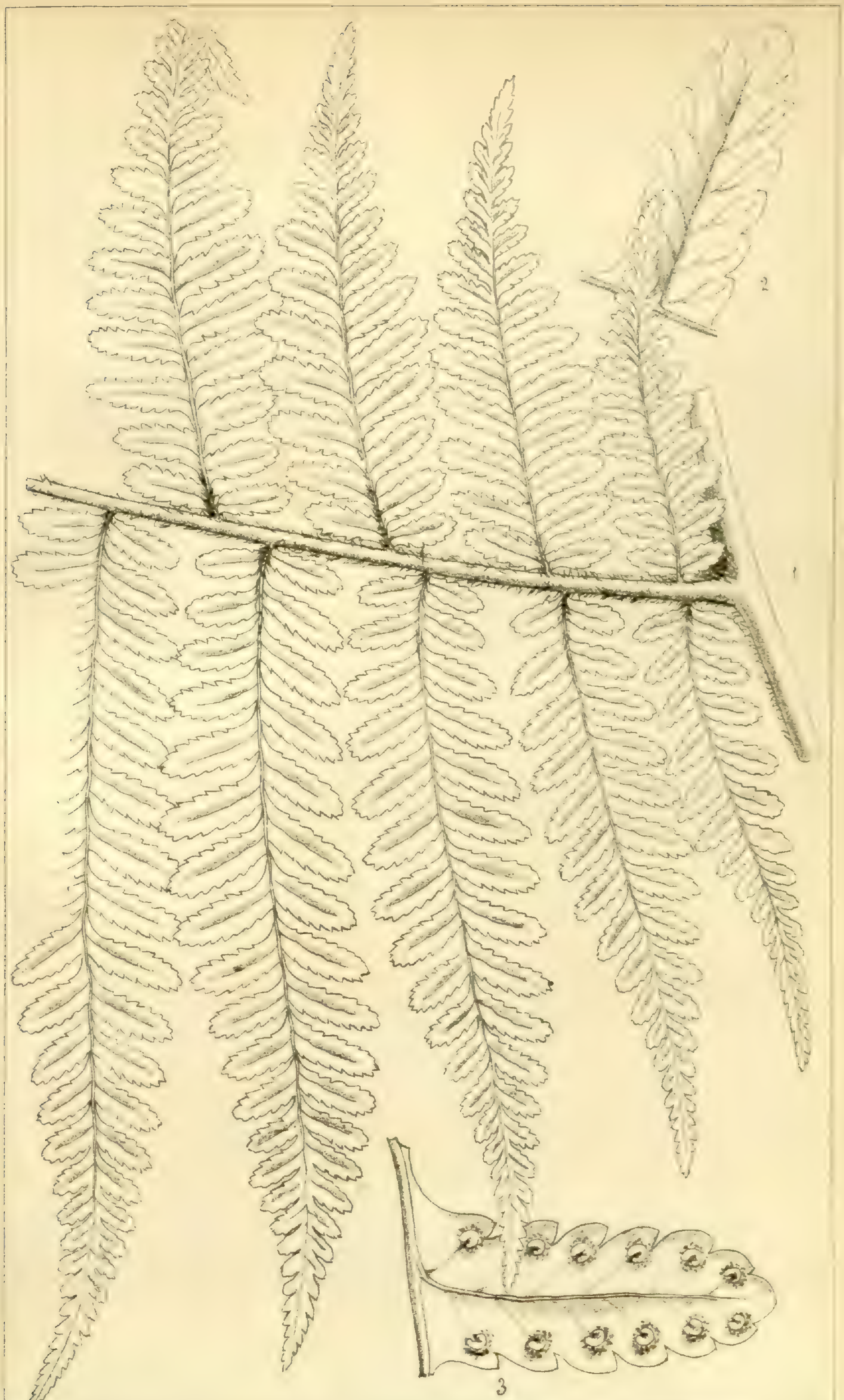
Nephrodium (Lastrea) magnum, *Baker in Journ. Bot.* 1884, p. 142; frondibus magnis bipinnatis firmulis viridibus glabris, pinnis oblongo-lanceolatis rachi minute paleaceo, infimis latere inferiori productis, pinnulis multijugis sessilibus lanceolatis pinnatis, segmentis tertiariis oblongo-lanceolatis obtusis crenatis segregatis basi adnatis, venulis erecto-patentibus sæpe furcatis, soris medialibus, indusio parvo glabro subpersistente.

Hab. Forest of North-west Madagascar, *Humblot*, 265.

Pinnæ pedales vel sesquipedales. *Pinnulæ* 3–4 poll. longæ, segmentis tertiariis 5–6 lin. longis.

A large subarborescent species, most resembling the glabrous varieties of the Tropical American *N. villosum*, Presl.—J. G. Baker.

Fig. 1. Lower front of pinna: *life size.* 2. Barren segment. 3. Fertile segment: *enlarged.*



J.Allen del.

Nephrodium magnum, Baker.

Plate 1664.

NEPHRODIUM BAKERI, *Harringt.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

Nephrodium (Eunephrodium) Bakeri, *Harringt. in Journ. Linn. Soc.*, vol. xvi. p. 29; caudice erecto, stipitibus cæspitosis elongatis minute crinitis, frondibus lanceolatis hispidis breviter pinnatifidis simplicibus vel basi pinnatis, segmentis ovatis obtusis, venis pinnatis, venulis 6–8-jugis erecto-patentibus simplicibus, pluribus ad apicem anastomosantibus, soris parvis medialibus, indusio minuto membranaceo hispido.

Hab. Philippines; mountains of Panay, *Steere.*

Stipites 2–4-pollicares, *Lamina* semipedalis, supra medium 9–12 lin. lata.

Allied to the West Indian *N. scolopendrioides*, Hook.

Fig. 1. Fronds: *life size.* 2. Portion of fertile frond: *enlarged.* 3. Portion, showing sorus with indusium: *much enlarged.*

2

3

1

J. Fitch del.

Nephrodium Bakeri, Harringt.

PLATE 1665.

NEPHRODIUM HEDERÆFOLIUM, *Baker.*

FILICES, Sub-order POLYPODIACEÆ, Tribe ASPIDIEÆ.

Nephrodium (**Sagenia**) **hederæfolium**, *Baker in Journ. Linn. Soc.* vol. xix. p. 295; stipitibus elongatis gracilibus nudis castaneis, frondibus submembranaceis glabris cordato-deltoideis profunde pinnatifidis, segmentis paucis latis ovatis acutis, infimis multo maximis inæquilateralibus postice valde productis profunde lobatis, venis in areolis parvis anastomosantibus, soris inter costam et marginem regulariter uniseriatis, indusio membranaceo glabro fugaci.

HAB. Solomon Isles, *Rev. R. B. Comins.*

Stipites 6–9 poll. longi. *Lamina* 5–6 poll. longa et lata.

Allied to the well-known Mauritian *Nephrodium* (*Sagenia*) *Pica*, Baker.—J. G. BAKER.

Fig. 1. Frond: *life size.* 2. Portion of frond, showing mature sorus, with indusium fallen. 3. Portion of frond, with young sori: *both enlarged.*

J.Allen del.

Nephrodium hederæfolium, Baker.

Plate 1666.

NEPHRODIUM TRIPARTITUM, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Aspidieæ.

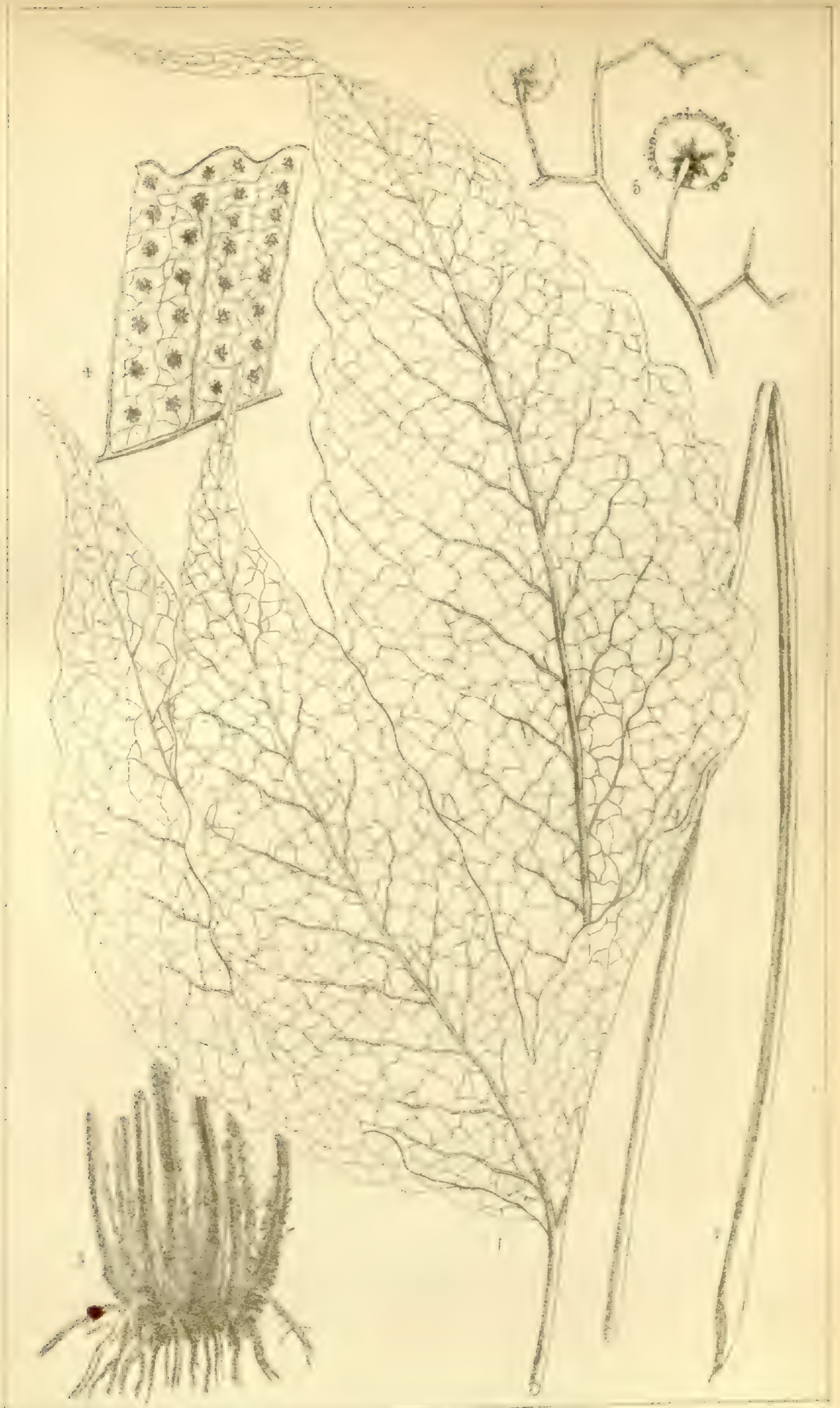
Nephrodium (Sagenia) tripartitum, *Baker in Journ. Bot.* 1879, p. 296; caudice erecto paleis paucis lanceolatis brunneis vestito, stipitibus cæspitosis elongatis atrocastaneis nudis, frondibus deltoideis tripartitis membranaceis glabris, segmento terminali oblongo-lanceolato acuminato crenato, lateralibus consimilibus simplicibus vel postice productis basi lobatis, venis primariis parallelis ascendentibus flexuosis, intermediis copiose anastomosantibus venulis liberis inclusis productis, soris inter venas primarias regulariter biseriatis, indusio membranaceo glabro.

Hab. Fiji Islands; steep earthy banks at Laru Laru Bay, Vanua Levu, *Horne*, 562.

Stipites pedales. *Lamina* 6–8 poll. longa. *Venæ primariæ* 3–4 lin. inter se distantes.

This is one amongst the many interesting ferns discovered by Mr. John Horne, of the Mauritian Botanic Garden, during his recent explorations in Fiji. It is allied to the Indian and Malayan *N. variolosum*, Baker.—J. G. Baker.

Fig. 1. Fronds. 2. Stipes. 3. Tuft of stipes: *life size.* 4. Portion of fertile segment: *enlarged.* 5. The same, *much enlarged*, showing indusia.



J Allen del.

Nephrodium tripartitum, Baker.

Plate 1667.

POLYPODIUM MAXIMOWICZII, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

Polypodium (Ptilopteris) Maximowiczii, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 504; caudice erecto, stipitibus gracilibus castaneis nudis, frondibus lanceolatis simpliciter pinnatis viridibus glabris apice interdum radicantibus, rachi nudo viridulo, pinnis multijugis sessilibus lanceolatis regulariter crenatis basi antice auriculatis postice cuneato-truncatis, inferioribus sensim minoribus, venulis simplicibus erecto-patentibus, soris terminalibus marginalibus.

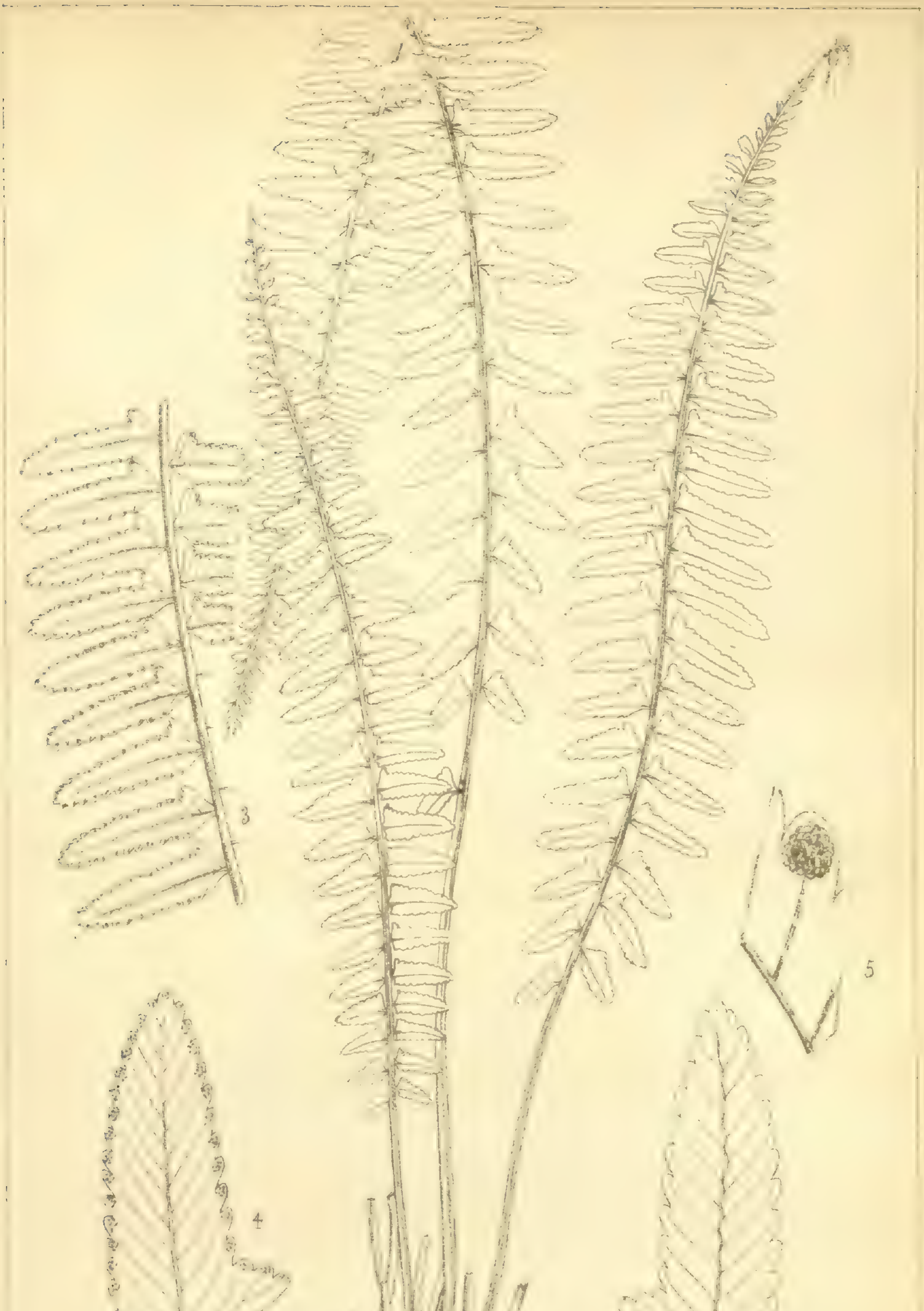
Ptilopteris Maximowiczii, *Hance in Journ. Bot.* 1884, p. 139.

Hab. Japan; high mountains of the island of Nippon, *Maximowicz, Hancock.*

Stipites 2–3-pollicares. *Lamina* pedalis et ultra, medio 8–12 lin. lata.

This is one of the few endemic ferns of the high mountains of Japan. It is one of the two species on which Dr. Hance founded his genus *Ptilopteris*, the other being my *Aspidium reductum*.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. Sterile pinna. 3. Portion of fertile frond. 4. Fertile pinna. 5. Lobe of pinna, with sorus: *all more or less enlarged.*



F Allen del

Polypodium Maximowiczii, Baker.

Plate 1668.

POLYPODIUM KRAMERI, *Franch. and Savat.*

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

Polypodium (Phegopteris) Krameri, *Franch. et Savat. Enum. Pl. Jap.* vol. ii. p. 244; rhizomate gracili late repente paleis parvis lanceolatis membranaceis adpressis vestito, stipitibus segregatis gracilibus nudis, frondibus parvis cordato-deltoideis profunde pinnatifidis viridibus membranaceis, pinnis lanceolatis profunde crenatis infimis maximis profunde lobatis, venulis gracilibus ascendentibus simplicibus, soris medialibus, inferioribus oblongis.—*Moore in Gard. Chron.* 1881, vol. i. p. 136.

Polypodium oyamense, *Baker in Journ. Bot.* 1877, p. 366.

Hab. Mountains of Japan, *Bissett.* Received also from Professor Eaton, and a drawing from Dr. Franchet.

Stipites 3–4 poll. longi. *Lamina* semipedalis et ultra.

A very distinct species, with the habit of the European *P. Phegopteris*. It has been brought into cultivation both in Britain and the United States.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. Primary segment. 3. Lobe of lower pinna: *both enlarged.*

J.Allen del.

Polypodium Krameri, Franch, et Savat.

Plate 1669.

POLYPODIUM OBLITERATUM, *Swartz.*

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

Polypodium (Goniopteris) obliteratum, *Swartz Fl. Ind. Occ.* pp. 1660, 2004; caudice erecto, stipitibus longissimis strictis stramineis nudis, frondibus oblongo-deltoideis simpliciter pinnatis glabris, rachi nudo stramineo, pinnis paucijugis lanceolatis simplicibus ascendentibus acuminatis breviter lobatis deorsum integris angustatis, lobis subtruncatis vel ovatis antice acutis, venis in lobis pinnatis, venulis multijugis erecto-patentibus simplicibus pluribus ad apicem anastomosantibus, soris parvis globosis subcostalibus.—*Griseb. Fl. Brit. West Ind.* p. 697.

Polypodium faucium, *Liebm.*; *Hook. et Baker, Syn. Fil.* p. 315.

Goniopteris hastata, *Fée, Fil. Ant.* p. 65, tab. 18, fig. 1.

Hab. Cuba, *C. Wright*, 1098. Jamaica, *Macfadyen, Jenman.* Mexico, *Liebmann.* Guadeloupe, *L. Herminier.*

We owe the identification of this with the type of Swartz to Mr. G. L. Jenman. It is a near ally of the common and variable *P. tetragonum*, Sw.—J. G. Baker.

Fig. 1. Apex of frond. 2. Base of stipes: *life size.* 3. Portion of fertile pinna. 4. Lobe, with sori: *both enlarged.*

Plate 1670.

POLYPODIUM TATEI, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

Polypodium (Dictyopteris) Tatei, *Baker in Hook. et Baker Syn. Fil.* edit. 2, p. 506; stipitibus elongatis castaneis nudis, frondibus magnis oblongo-deltoideis membranaceis viridibus glabris, apice caudatis pinnatifidis lobis ovatis vel lanceolatis, deorsum simpliciter pinnatis, pinnis lanceolatis acuminatis repandis, superioribus basi adnatis, infimis maximis subpetiolatis, venis copiose anastomosantibus, venulis liberis inclusis multis productis, soris globosis superficialibus sparsis multis submarginalibus.

Hab. Nicaragua; forests of Chontales, *Ralph Tate.*

Caudex ignotus. *Lamina* 2–3-pedalis. *Pinnæ* infimæ subpedales, medio 12–15 lin. latæ.

This very distinct and interesting species was discovered by Professor Tate when he visited the gold-mines of Chontales in 1868.—J. G. Baker.

Fig. 1. Portion of apex of frond: *life-size.* 2. Small portion with sorus: *enlarged.*

J.Allen del.

Polypodium Tatei, Baker.

Plate 1671.

POLYPODIUM EGGERSII, *Baker*.

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

Polypodium (Eupolypodium) Eggersii, *Baker (sp. nov.)*; caudice erecto, stipitibus brevibus cæspitosis erectis gracilibus viridibus pilosis, frondibus parvis lanceolatis simpliciter pinnatis membranaceis utrinque viridibus pilosis, pinnis multijugis ascendentibus lanceolatis integris basi adnatis, inferioribus sensim minoribus, venulis 5–6-jugis erecto-patentibus simplicibus, soris magnis globosis superficialibus medialibus.

Hab. Dominica, *Baron Eggers*, 937.

Stipites 1–2 poll. longi. *Lamina* 3–4-pollicaris, medio 9–10 lin. lata.

Intermediate between two well-known West Indian types, *P. pendulum* and *P. suspensum*.—J. G. Baker.

Figs. 1 and 2. Fronds: *life size*. 3. Fertile pinna: *enlarged*. 4. A single capsule: *much enlarged*.

J. Allen del

Polypodium Eggersii, Baker.

Plate 1672.

POLYPODIUM POZUZOENSE, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

Polypodium (Eupolypodium) pozuzoense, *Baker* (*sp. nov.*) ; stipitibus brevibus gracilibus cæspitosis parce pilosis, frondibus firmulis oblongo-lanceolatis pinnatis pendulis glabris obscure viridibus, pinnis 30–40-jugis linearibus basi adnatis crenatis vel sæpe pinnatifidis lobis ascendentibus valde irregularibus, venulis erecto-patentibus immersis occultis, soris globosis superficialibus.

Hab. Cordilleras of Pozuzo, alt. 8000 feet, on trees, *Pearce*, 248.

Stipites 1–2 poll. longi. *Lamina* pedalis vel sesquipedalis.

This curious species was discovered by Mr. Richard Pearce, in 1863, when on a collecting expedition on behalf of Messrs. Veitch. It is allied to the Peruvian *P. myriophyllum*, Mett.

Fig. 1. Frond. 2. Large pinna : *both life size.* 3. Portion of pinna : *enlarged.*

J.Allen del

Polypodium pozuzoense, Baker.

Plate 1673.

POLYPODIUM TORULOSUM, *Baker*.

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

Polypodium (Eupolypodium) torulosum, *Baker in Journ. Linn. Soc.* vol. xvi. p. 204; stipitibus brevibus cæspitosis gracillimis pilosis, frondibus parvis pendulis firmulis lanceolatis viridibus pilosis, pinnis multijugis adnatis ascendentibus linearibus integris vel pinnatifidis, venis occultis immersis, soris superficialibus globosis.

Polypodium muscicola, *Cordemoy MSS.*

Hab. Central Madagascar, *Miss Helen Gilpin*; Bourbon, *Cordemoy*, *Delisle.*

Stipites 1–1½ poll. longi. *Lamina* 3–6-pollicaris, medio 4–12 lin. lata.

Allied to the Brazilian *P. achilleæfolium*, Kaulf. Interesting geographically as being a species common to the mountains of Bourbon and Central Madagascar.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. Pinna. 3. Portion of pinna: *enlarged.*

J Allen del.

Polypodium torulosum, Baker.

Plate 1674.

POLYPODIUM NOVÆ-ZEALANDIÆ, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

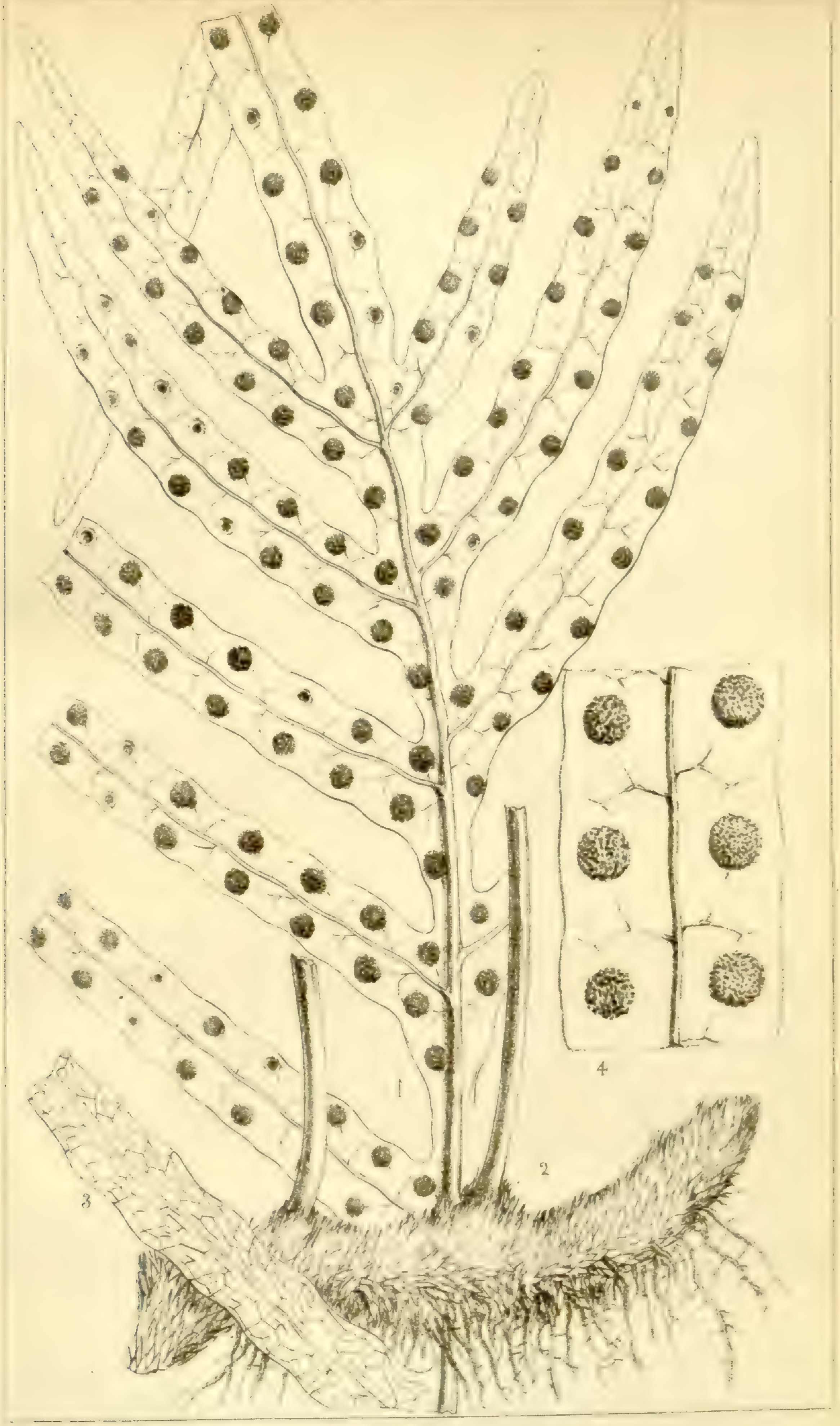
Polypodium (Phymatodes) Novæ-Zealandiæ, *Baker* (*sp. nov*); rhizomate crasso late repente paleis ferrugineis lanceolatis dense vestito, stipitibus elongatis strictis stramineis nudis, frondibus magnis oblongo-lanceolatis simpliciter pinnatis firmulis viridibus glabris, pinnis multijugis lanceolatis basi late adnatis, venis gracilibus immersis obscuris copiose anastomosantibus, soris magnis globosis superficialibus medialibus.

Hab. New Zealand; mountains of the Upper Waikoto district, alt. 2500 ft., *Cheesman.*

Stipites semipedales vel pedales. *Lamina* 1–4-pedalis, medio 6–12 poll. lata.

An interesting new species of the group of *Polypodium Phymatodes.* It is fully described, but not named, by Mr. Cheesman, in a paper in the *Transactions of the New Zealand Institute*, vol. x. p. 356. — J. G. Baker.

Fig. 1. Portion of frond. 2. Rhizome. 3. Pinna, showing veining: *life size.* 4. Portion of fertile pinna: *enlarged.*



J Allen del.

Polypodium novæ-zelandiæ Baker

Plate 1675.

POLYPODIUM MACROCHASMUM, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Polypodieæ.

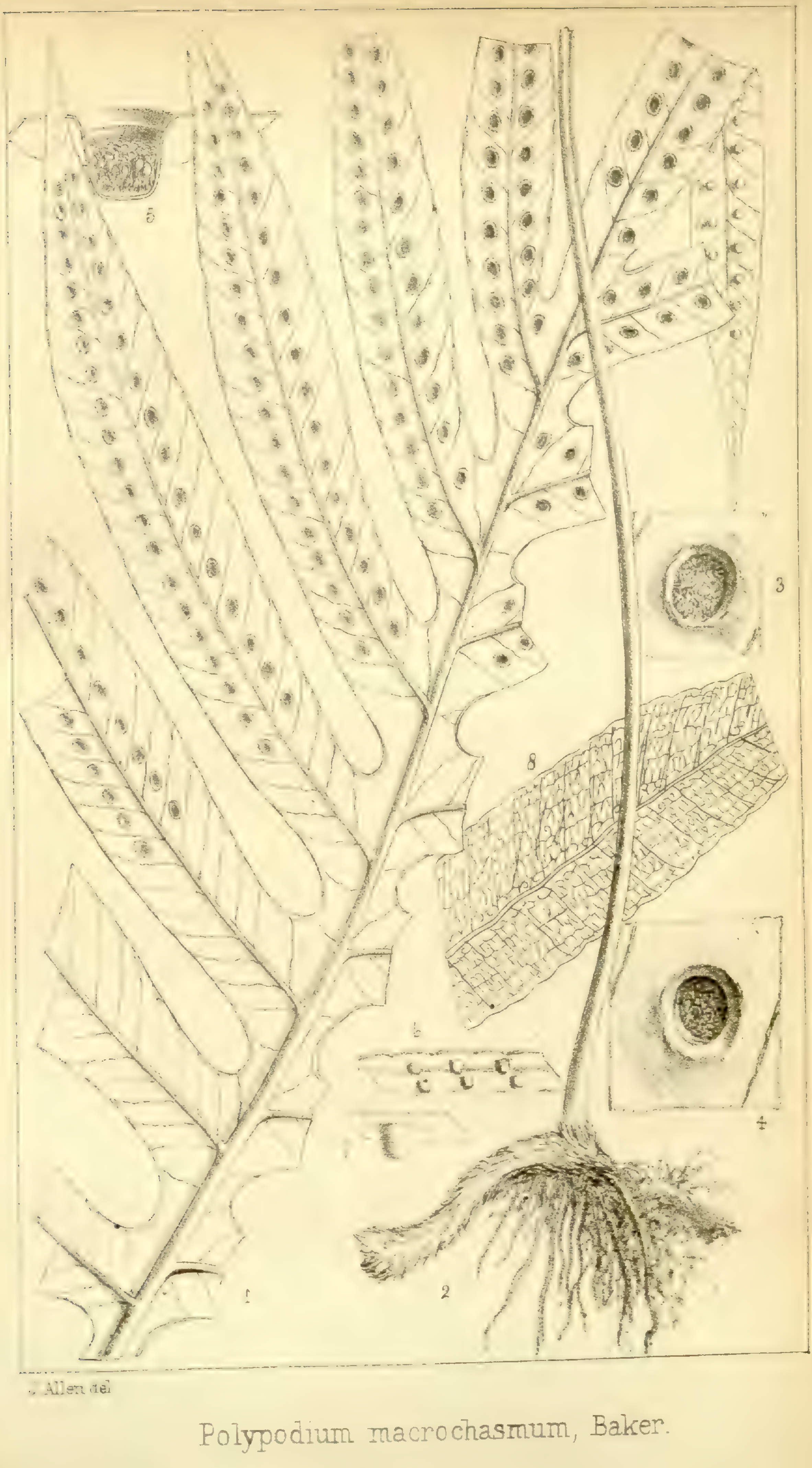
Polypodium (Phymatodes) macrochasmum, *Baker in Journ. Bot.* 1880, p. 216; rhizomate late repente paleis linearibus ferrugineis membranaceis dense vestito, stipitibus strictis elongatis nudis, frondibus oblongo-deltoideis simpliciter pinnatis rigidulis viridibus glabris, pinnis lanceolatis basi confluentibus, venis primariis parallelis ad marginem productis, intermediis obscuris immersis anastomosantibus, soris subcostalibus uniseriatis profunde immersis.

Hab. Sumatra; Mount Singalan, alt. 5000–6,000 ft., *Dr. Beccari.*

Stipites semipedales. *Lamina* pedalis, pinnis medio 6–12 lin. latis.

A very distinct species, discovered lately, with many other novelties, by Dr. Beccari, in his explorations of the mountains of Sumatra.—J. G. Baker.

Fig. 1. Portion of frond. 2. Rhizome and stipes: *life size.* 3–4–5. Portions of frond to show sori. 6–7. Papillose upper surface: *both enlarged.*



J. Allen del

Polypodium macrochasmum, Baker.

Plate 1676.

NOTOCHLÆNA CHINENSIS, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

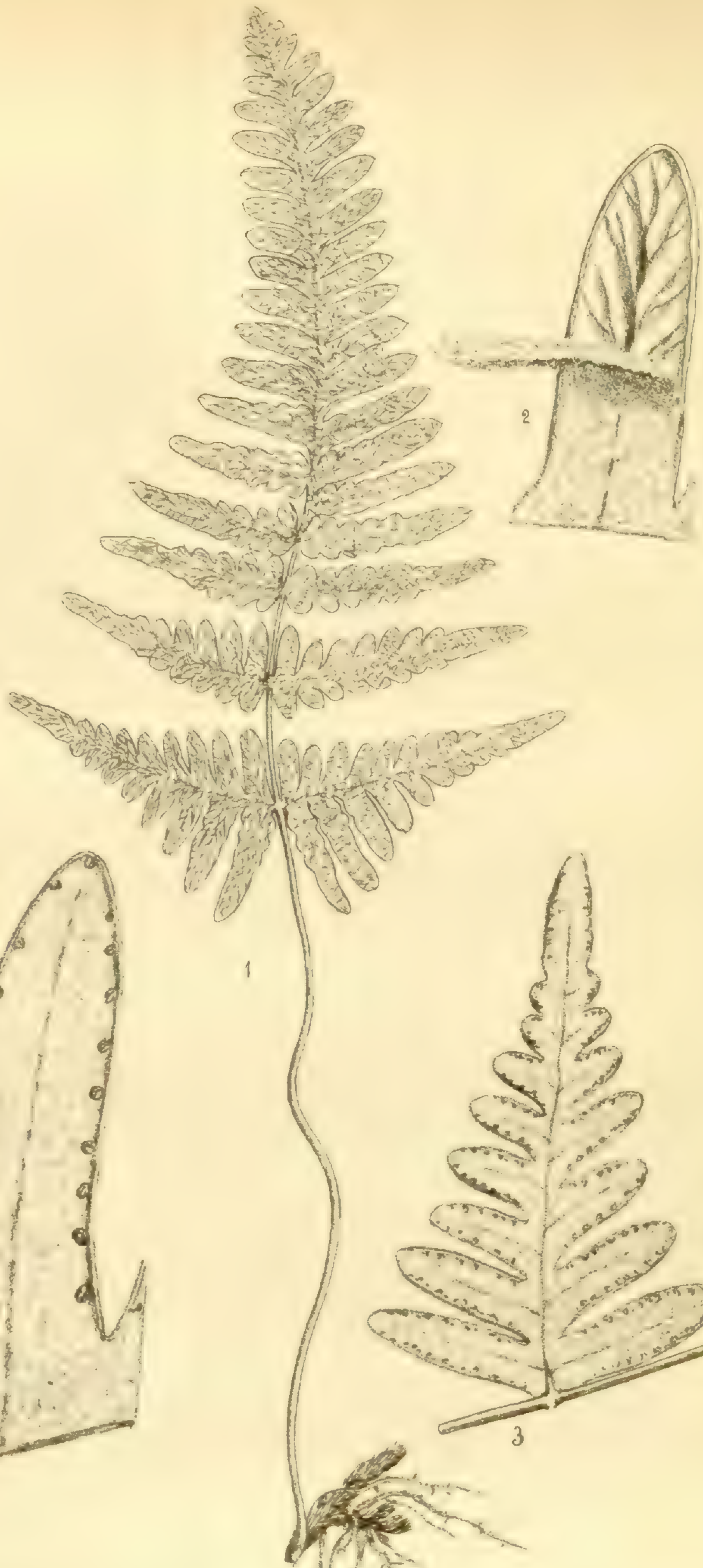
Notochlæna chinensis, *Baker in Gard. Chron. n. s.* vol. xiv. p. 494; rhizomate gracili repente paleis parvis castaneis linearibus adpressis vestito, stipitibus gracilibus elongatis castaneis nudis, frondibus parvis oblongo-deltoideis bipinnatis facie viridibus parce pilosis dorso dense persistenter albo-brunneo-tomentosis, rachi castanea parce pilosa, pinnis multijugis sessilibus lanceolatis, infimis maximis inæquilateralibus deltoideis, pinnulis infimis lanceolatis integris vel crenatis, venis immersis occultis venulis erecto-patentibus furcatis, soris minutis globosis marginalibus.

Hab. Central China; Ichang Gorge, *Maries.*

Stipites 3–4 poll. longi. *Lamina* 3–4 poll. longa, pinnis infimis 8–9 lin. latis.

Nearly allied to the well-known European *N. Marantæ*, R. Br.—J. G. Baker.

Fig. 1. A frond: *life size.* 2. A pinnule. 4. A pinna. 3. A pinnule, with tomentum torn away to show the veins: all *more or less enlarged.*



J. Allen del.

Notochlæna chinensis. Baker.

Plate 1677.

NOTOCHLÆNA BALANSÆ, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Notochlæna Balansæ, *Baker in Journ. Bot.* 1878, p. 801; rhizomate breviter repente paleis linearibus brunneis patulis dense vestito, stipitibus brevibus contiguis castaneis tomentosis, frondibus oblongo-lanceolatis facie viridibus parce pilosis dorso dense persistenter minute squamosis, rachi castanea paleacea, pinnis multijugis sessilibus lanceolatis infimis reductis, pinnulis multijugis parvis oblongis contiguis adnatis, venis occultis immersis, soris copiosis confluentibus.

Hab. Paraguay; rocky banks of the Rio Paraguay near Assumption, *Balansa*, 330.

Stipites 1–2 poll. longi. *Lamina* 6–9 poll. longa, medio 12–15 lin. lata.

Allied to the Mexican and Arizonan *N. Aschenborniana*, Klotzsch.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. Pinna: *enlarged.*

J. Allen del.

Notochlæna Balansæ, Baker.

Plate 1678.

NOTOCHLÆNA PALMERI, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Notochlæna (Cincinalis) Palmeri, *Baker* (*sp. nov.*) ; caudice erecto paleis paucis lanceolatis brunneis membranaceis apice vestito, stipitibus brevibus cæspitosis atro-castaneis nudis, frondibus oblongo-lanceolatis bipinnatis facie viridibus glabris dorso albo-ceraceis, pinnis multijugis sessilibus lanceolatis, pinnulis paucijugis sessilibus oblongis integris, venis immersis occultis, soris copiosis demum pinnularum dorsum totum occupantibus.

Hab. Mexico ; mountains of San Luis Potosi, alt. 6000–8000 ft., *Parry and Palmer*, 991.

Stipites 1–1½ poll. longi. *Lamina* 3–6-pollicaris, medio 6–12 lin. lata.

This is only one amongst a large number of new species of *Notochlæna*, several of which have been figured by Professor Eaton, which have been discovered in Mexico and the South-western United States since the publication of the last edition of *Synopsis Filicum*. Of the species included therein the present plant comes nearest to *N. affinis*, Hook.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. A pinna. 3. Segment to show sori in a young stage: *both enlarged.*

J. Allen del.

Notochlæna Palmeri, Baker.

Plate 1679.

NOTOCHLÆNA HOOKERI, *Eaton.*

Filices, Sub order Polypodiaceæ, Tribe Grammitideæ.

Notochlæna (Cincinalis) Hookeri, *Eaton, Ferns South-west*, p. 808, tab. 30; rhizomate breviter repente paleis lanceolatis brunneis patulis medio nigris dense vestito, stipitibus elongatis castaneis nudis, frondibus parvis cordato-quadrangularibus palmatim quinquefidis facie viridibus glabris dorso albo-ceraceis, lobis rhomboideis pinnatis vel profunde pinnatifidis, segmentis lanceolatis integris vel infimis crenatis, venis immersis occultis, soris marginalibus confluentibus.—*Eaton, Ferns Brit. North Amer.* vol. ii. p. 25, tab. 49.

Notochlæna candida, var. quinquefido-palmata, *Hook. Sp. Fil.* vol. v. p. 211.

Hab. California, *Bigelow*; Arizona, *Lemmon, Pringle*; New Mexico, *C. Wright*, 821, *Vasey*, 583, *Rusby*; Mexico; San Luis Potosi, a variety with yellow powder, *Parry*, 922.

Stipites 2-5 poll longi. *Lamina* 2–3 poll. longa et lata.

Differs from all the other ceraceous Notochlænas by its palmate cutting. It was first characterised as a species by Professor Eaton, and has been gathered in numerous localities of late years, but is not yet brought into cultivation.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2, 3, 4. Segments: *more or less enlarged.*

J. Allen del.

Notochlæna Hookeri, Eaton.

Plate 1680.

GYMNOGRAMME ANDERSONI, *Beddome.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Gymnogramme Andersoni, *Beddome, Ferns Brit. Ind.* tab. 190; caudice erecto, stipitibus dense cæspitosis stramineis pilosis, frondibus parvis oblongo-lanceolatis bipinnatifidis membranaceis utrinque viridibus dense pilosis, pinnis multijugis sessilibus ovatis profunde pinnatifidis segmentis contiguis oblongis, venis pinnatis venulis gracilibus ascendentibus, soris globosis medialibus demum confluentibus.—Handbook, p. 382; *Hook. et Baker, Syn. Fil.* p. 380.

Woodsia lanosa, *Hook. et Baker, Syn. Fil.* p. 47.

Hab. Alpine region of Central and Eastern Himalayas, Kumaun, and Garwhal, 11,000–12,000 ft., *Strachey and Winterbottom, Duthie*; Sikkim, 14,000–16,000 ft., *Sir J. D. Hooker.*

Stipites 1–3 poll. longi. *Lamina* 2–5 poll. longa, pinnis 5-6 lin. latis.

This has the habit of *Woodsia ilvensis* and *hyperborea*, but I find no trace of an indusium, so that Colonel Beddome is quite right in placing it in *Gymnogramme*.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2 and 3. Pinnæ: *enlarged.*

J. Allen del.

Gymnogramme Javanense, Blume.

Plate 1681.

GYMNOGRAMME XEROPHILA, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Gymnogramme xerophila, *Baker in Journ. Bot.* 1881, p. 206; frondibus amplis deltoideis decompositis subcoriaceis facie viridibus glabris dorso dense persistenter ferrugineo-tomentosis, rachibus castaneis tomentosis, pinnis magnis petiolatis oblongo-lanceolatis, pinnulis multijugis lanceolatis, segmentis tertiariis ovato-oblongis obtusis lobis rotundatis marginibus leviter revolutis, venis pinnatis liberis venulis ascendentibus furcatis, soris medialibus.

Hab. New Granada; province of Antioquia, in open rocky places, alt. 8000 ft., *Kalbreyer*, 1563.

Lamina 4–5-pedalis. *Pinnæ* infimæ pedales et ultra.

A very striking and distinct new species, discovered by Mr. Kalbreyer in 1879 when collecting on behalf of Messrs. Veitch.—J. G. Baker.

Fig. 1. Lower part of a pinna: *life size.* 2. Barren segment, denuded of tomentum to show the veining. 3 and 4. Final segments: *enlarged.*

J.Allen del.

Gymnogramme xerophila, Baker.

PLATE 1682.

GYMNOGRAMME SCHIZOPHYLLA, *Baker.*

FILICES, Sub-order POLYPODIACEÆ, Tribe GRAMMITIDEÆ.

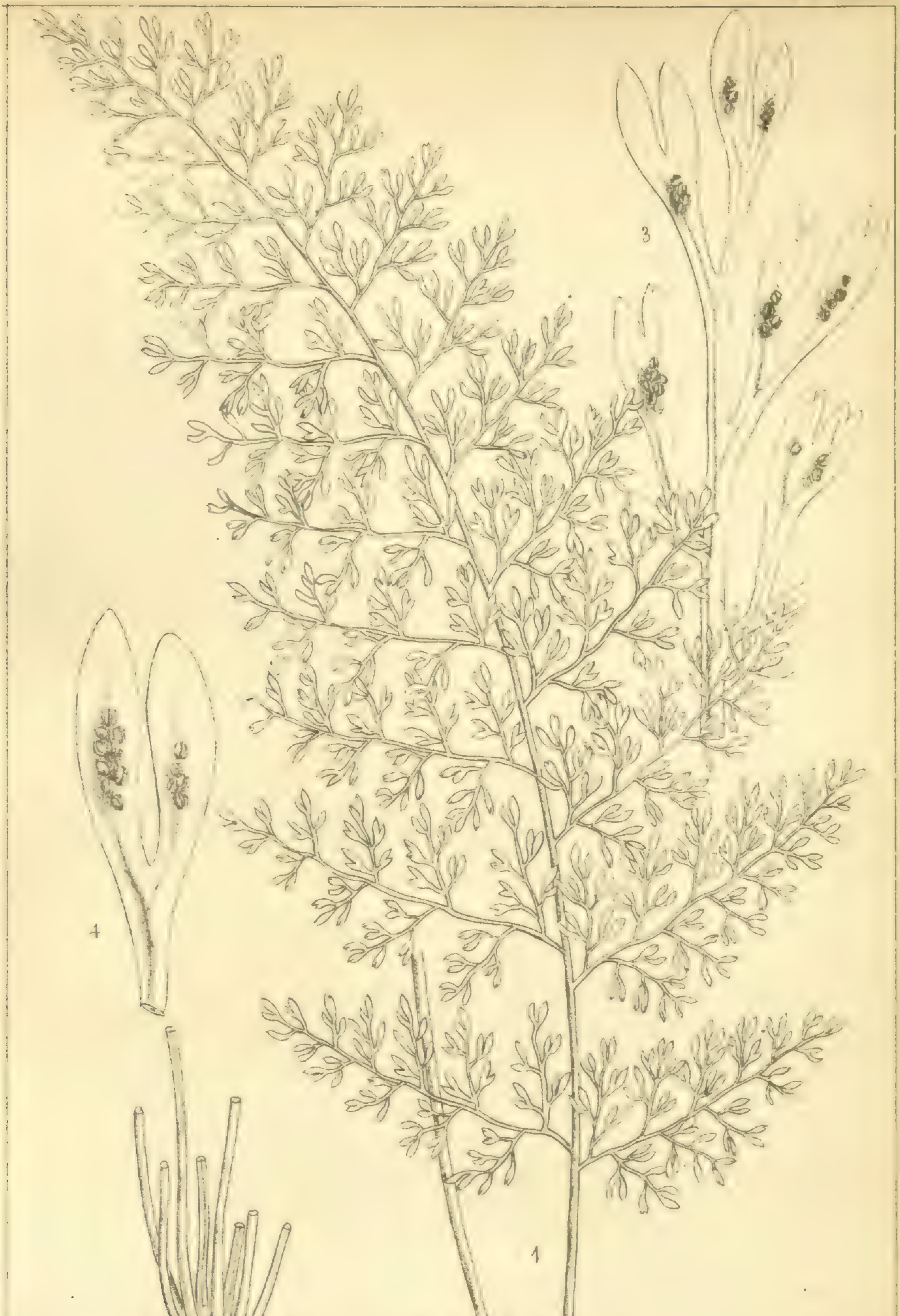
Gymnogramme schizophylla, *Baker in Journ. Bot.* 1877, p. 266; caudice erecto, stipitibus brevibus nudis gracilibus castaneis, frondibus oblongo-lanceolatis decompositis membranaceis glabris viridibus, rachi recta castanea, pinnis multijugis deltoideis basi postice cuneato-truncatis, inferioribus reductis remotis, segmentis ultimis linearibus uninerviis segregatis deorsum attenuatis, soris ad venas decurrentibus oblongis.

HAB. Mountains of Jamaica, alt. 4000–5000 ft., *Miss Taylor*, *Jenman*, *Nock.*

Stipites 1–3 poll. longi. *Lamina* pedalis vel semipedalis, medio 2–4 poll. lata.

This handsome species was found long ago by Miss Taylor, but was not described. It was rediscovered by Messrs. Nock and Jenman in 1875, and has now been introduced into cultivation.—J. G. BAKER.

Fig. 1. An entire frond. 2. Tuft of stipes: *life size.* 3 and 4. Final divisions: *enlarged.*



J. Allen del.

Gymnogramme schizophylla, Baker.

Plate 1683.

GYMNOGRAMME PREHENSIBILIS, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Gymnogramme prehensibilis, *Baker in Hook. et Baker, Syn. Fil.* edit. 2, p. 517; frondibus amplis scandentibus membranaceis viridibus glabris, pinnis oblongo-lanceolatis rachibus castaneis valde flexuosis, pinnulis ovatis basi postice cuneato-truncatis, segmentis ultimis latis cuneatis inæqualiter flabellatim sectis, venis liberis flabellatis, soris oblongis vel cylindricis supra medium venularum decurrentibus.

Hab. Andes of New Granada; province of Antioquia, alt. 6000 ft., *Kalbreyer*, 1365; Ecuador; Sandillani, 8000–9000 ft., *Pearce.*

Lamina 4–6-pedalis. *Pinnæ* pedales. *Segmenta* ultima 3–4 lin. lata.

A very fine large scandent species, discovered by Messrs. Veitch's collectors.—J. G. Baker.

Fig. 1. Lower pinna: *life size.* 2. Final segment: *enlarged.*

J.Allen del.

Gymnogramme prehensibilis, Baker.

Plate 1684.

GYMNOGRAMME EXTENSA, *Baker*.

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Gymnogramme extensa, *Baker in Endl. et Mart. Fl. Brasil.* vol. i. part 2, p. 599; stipitibus elongatis gracilibus nudis castaneis, frondibus elongatis decompositis membranaceis glabris viridibus, rachi recta gracili castanea, pinnis remotis patulis deltoideis cum pinnulis deltoideis basi postice cuneato-truncatis, segmentis ultimis cuneatis flabellatim sectis lobis uninerviis, soris medialibus oblongo-cylindricis.

Anogramme Biardii, *Fee, Crypt. Vasc. Bras.* p. 241, tab. 77, fig. 1.

Gymnogramme Biardii, *Baker in Hook. et Baker, Syn. Fil.* edit. 2. p. 516.

Hab. Rio Janeiro; forests of the Organ mountains, *Glaziou*, 3331.

Stipites 8–12 poll. longi. *Lamina* sesquipedalis vel bipedalis, pinnis 2–3 poll. longis.

This is one of the discoveries of Dr. Glaziou, who has collected most energetically in South Brazil during the last fifteen years. It is allied to the Andine *G. hirta*, Desv.—J. G. Baker.

Fig. 1. Portion of frond: *life size*. 2. Fertile pinnule: *enlarged*.

T.Allen del.

Gymnogramme extensa, Baker.

Plate 1685.

GYMNOGRAMME CANTONIENSIS, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Gymnogramme (Sellignea) cantoniensis, *Baker*; rhizomate gracili late repente, paleis lanceolatis adpressis membranaceis nigrescentibus clathratis, frondibus valde dimorphis, sterilibus parvis ovatis obtusis integris basi rotundatis vel subcordatis, stipitibus frondibus æquilongis nudis viridulis, venis inconspicuis immersis copiose anastomosantibus, frondibus fertilibus lanceolatis, soris cylindricis cite confluentibus.

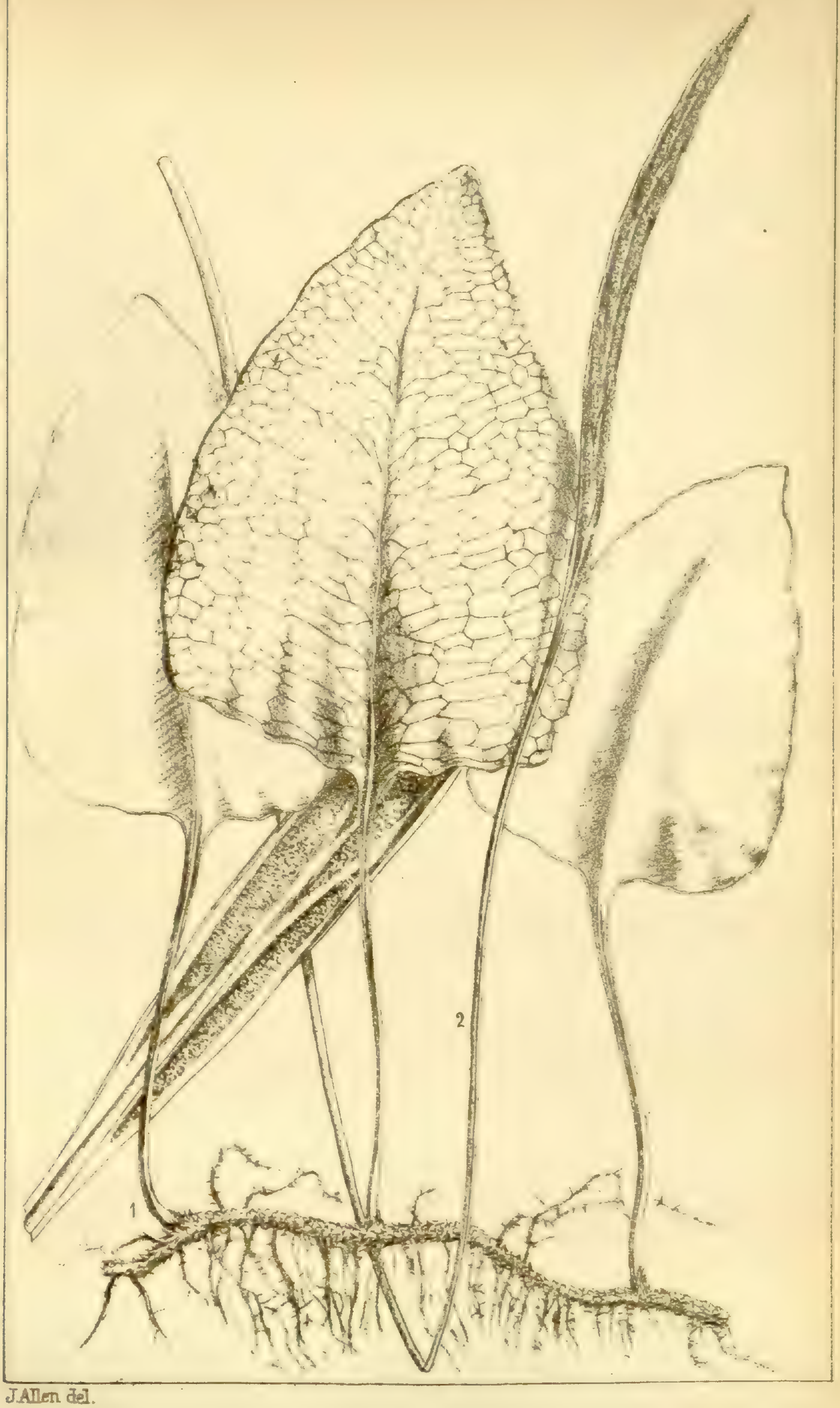
Polypodium ? cantoniense, *Baker in Journ. Bot.* 1879, p. 304.

Hab. Banks of the North river, Canton, *Ford.*

Lamina sterilis 2–3-pollicaris. *Lamina fertilis* 3 poll. longa, medio 2–3 lin. lata.

This very distinct species was discovered in 1878 by Mr. Charles Ford, of the Hong Kong Botanic Garden. It is only quite recently that we have seen the fertile frond, and it has lately been brought into cultivation.—J. G. Baker.

Fig. 1. Sterile fronds. 2. Fertile frond : *both life siz* . 3. Fertile frond : *enlarged.*



J.Allen del.

Gymnogramme cantoniensis, Baker.

Plate 1686.

DRYMOGLOSSUM NIPHOBOLOIDES, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Drymoglossum niphoboloides, *Baker*; rhizomate gracili flexuoso late repente, paleis ovatis ferrugineis membranaceis conspicue ciliatis, frondibus valde dimorphis, sterilibus breviter petiolatis coriaceis parvis oblongis obtusis basi cuneatis pilis stellatis deciduis præditis, frondibus fertilibus majoribus lanceolatis, venis inconspicuis immersis, soris perfecte marginalibus continuis vel interruptis.

Tænitis (Drymoglossum) niphoboloides, *Luerssen in Reliq. Ruten.* p. 49, tab. 1, fig. 3–6.

Hab. Forests of North-west Madagascar, *Rutenberg*, *Humblot* 310.

Lamina sterilis subpollicaris. *Lamina fertilis* 3–6-pollicaris, medio 3–4 lin. lata.

This very distinct species, which was first gathered by the unfortunate traveller Rutenberg, has lately been refound by Humblot. It has not been sent home by any of the English collectors.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. Cross section of fertile frond. 3. Palea. 4, 5. Stellate hairs: *all enlarged.*

J.Allen del.

Drymoglossum piloselloides, Presl.

Plate 1687.

HEMIONITIS PINNATA, *J. Smith.*

Filices, Sub-order Polypodiaceæ, Tribe Grammitideæ.

Hemionitis pinnata, *J. Smith, Gen. Fil.* p. 33; caudice erecto apice paleis parvis lanceolatis membranaceis pallide brunneis prædito, stipitibus elongatis cæspitosis castaneis gracilibus nudis, frondibus ovato-oblongis membranaceis pilosis apice pinnatifidis deorsum simpliciter pinnatis, rachi castanea pilosa, pinnis paucijugis sessilibus, centralibus oblongo-lanceolatis obtusis crenatis, infimis maximis postice productis basi profunde lobatis, venis arcuatis extrorsum anastomosantibus, soris ad venas omnes productis.—*Hook. et Baker, Syn. Fil.* p. 399.

Hab. **Jamaica, *Wiles, Jenman, Sherring.***

Stipites 6–8 poll. longi. *Lamina* 6–8-pollicaris.

Of this, which is one of the most curious and rarest of the West Indian ferns, we have lately received a specimen for the first time from Mr. G. S. Jenman.—J. G. Baker.

Fig. 1. Whole frond: *life size.* 2. Fertile pinna: *a little enlarged.* 3. Portion of fertile pinna: *much enlarged.*

J. Miers del.

Hemionitis pinnata, J. Sm.

Plate 1688.

ACROSTICHUM SODIROI, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Acrosticheæ.

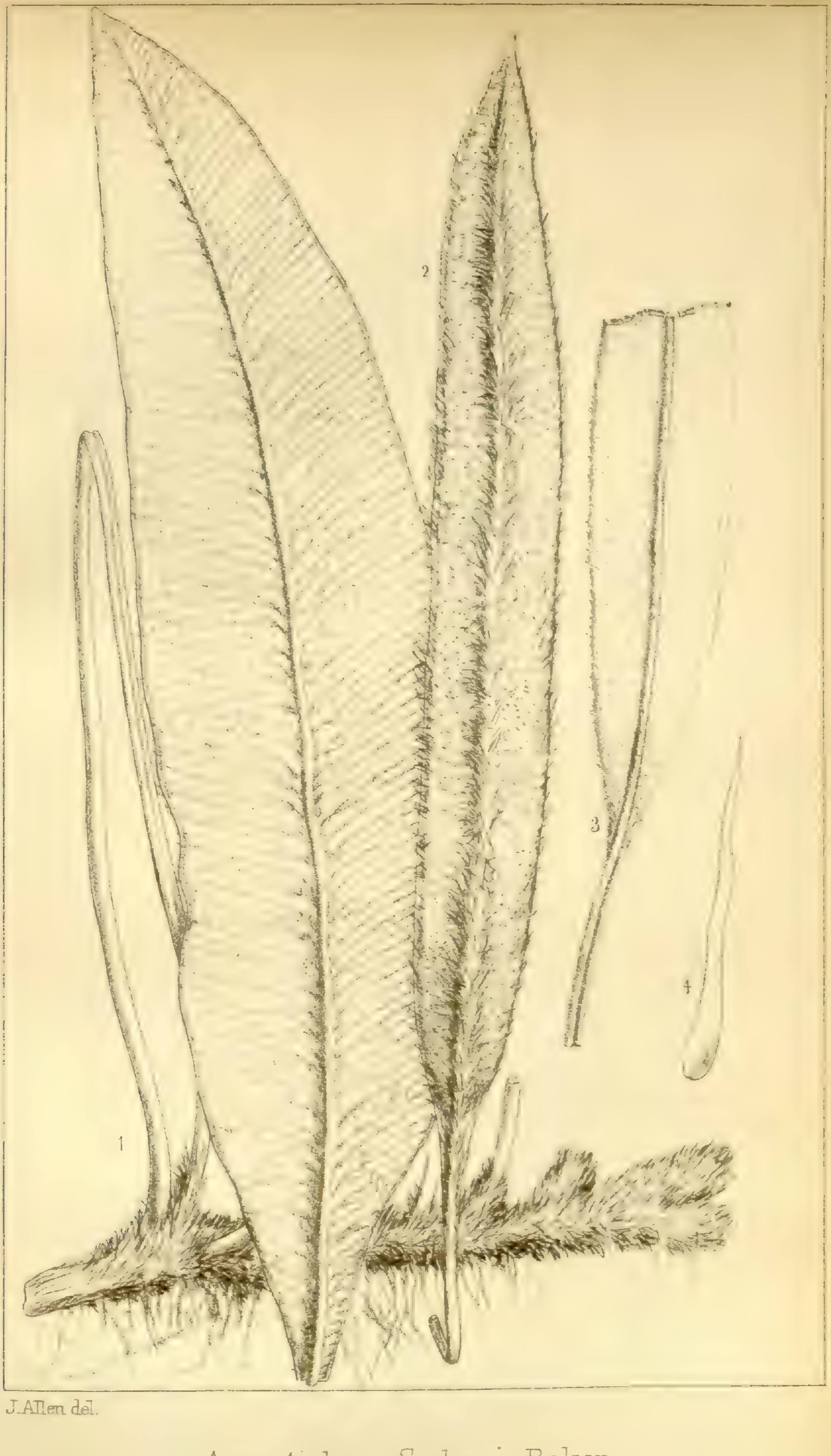
Acrostichum (Elaphoglossum) Sodiroi, *Baker in Journ. Bot.* 1877, p. 167; rhizomate valido lignoso late repente paleis parvis castaneis membranaceis lanceolatis dense vestito, frondibus dimorphis, stipitibus longissimis viridulis parce paleaceis, frondibus sterilibus ligulato-lanceolatis subcoriaceis basi angustatis utrinque paleis adpressis linearibus castaneis haud ciliatis tenuiter vestitis, venis obscuris subpatulis sæpe furcatis, frondibus fertilibus lanceolatis, costis faciei inferioris dense paleaceis.

Hab. Andes of Ecuador, in pastures of Mount Carazon, *Sodiro.*

Stipites pedales et ultra. *Lamina* sterilis 6–8 poll. longa, 12–15 lin. lata; fertilis 8–9 lin. lata.

This is one of the many new species discovered lately by Father Sodiro in the Andes of Quito. It belongs to the group of the *Oligolepidæ*, in the neighbourhood of *A. scolopendrifolium*.—J. G. Baker.

Fig. 1. Sterile frond, with rhizome. Figs. 2 and 3. Fertile fronds: *both life size.* 4. Palea: *enlarged.*



J.Allen del.

Acrostichum Sodiroi, Baker.

Plate 1689.

ACROSTICHUM NEGLECTUM, *Bailey.*

Filices, Sub-order Polypodiaceæ, Tribe Acrosticheæ.

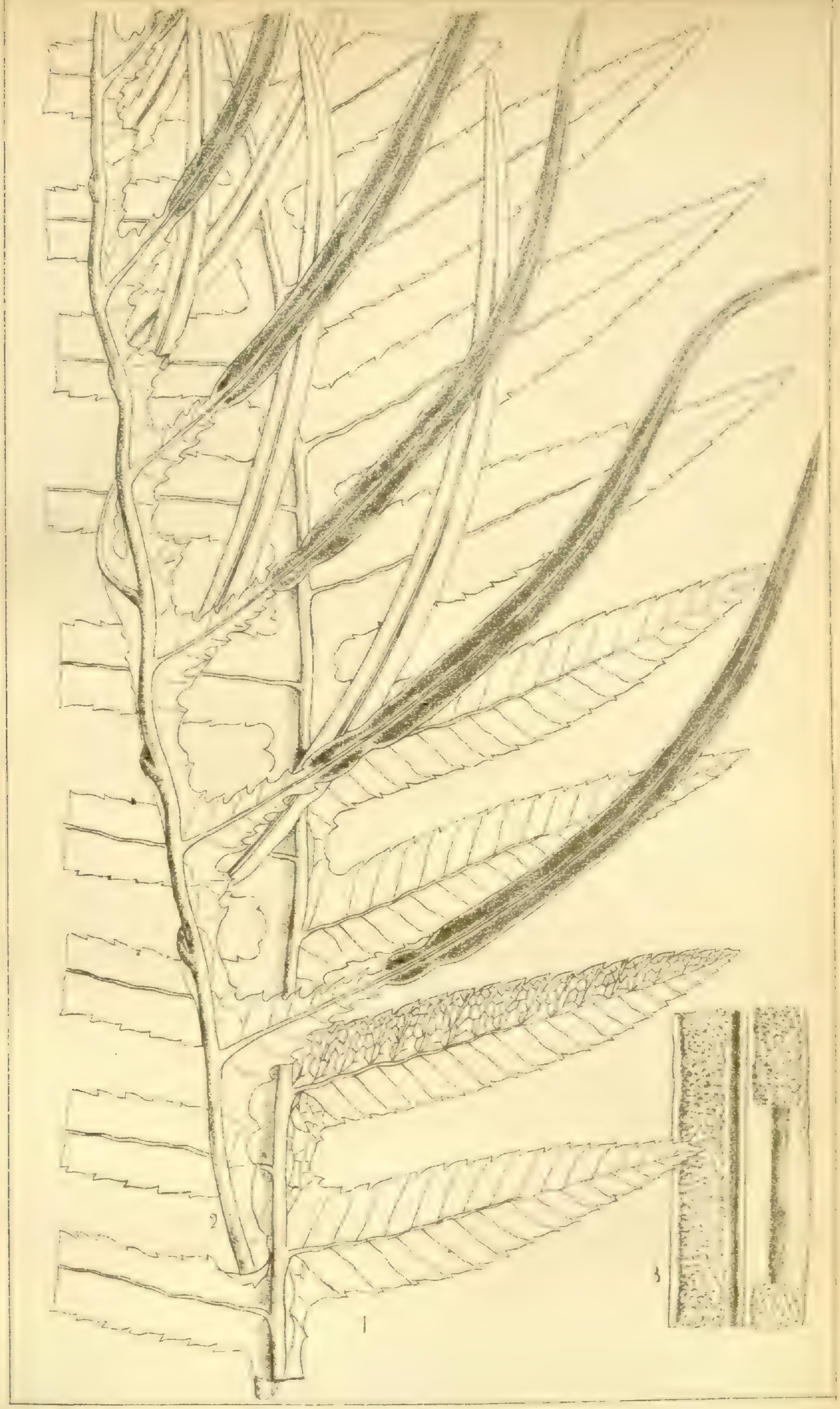
Acrostichum (Gymnopteris) neglectum, *Bailey, Synops. Queenl. Flora*, p. 222; rhizomate repente, frondibus dimorphis, sterilibus oblongo-lanceolatis profunde pinnatifidis membranaceis glabris viridibus, stipitibus elongatis fere ad basin alatis, pinnis multijugis lanceolatis acuminatis breviter pinnatifidis, lobis antice cuspidatis, venis primariis erecto-patentibus rectis parallelis, venulis intermediis copiose anastomosantibus, frondibus fertilibus minoribus, stipitibus longioribus, segmentis linearibus integris.

Hab. Queensland; gullies of Trinity Bay ranges, *Bailey.*

Lamina 3–4-pedalis, stipite alato incluso. *Pinnæ* centrales 4–5 poll. longæ, 8–9 lin. latæ.

This very distinct new species was first received at Kew from Baron von Mueller in 1880. It comes nearest to the widely spread Indian *A. virens*, Wall. It was discovered and described by Mr. F. M. Bailey, Government botanist to the colony of Queensland.—J. G. Baker.

Fig. 1. Portion of sterile frond. 2. Portion of fertile frond: *both life size.* 3. Portion of fertile pinna: *enlarged.*



J. Allen del.

Acrostichum neglectum, Bailey.

Plate 1690.

ACROSTICHUM POLYBOTRYOIDES, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Acrosticheæ.

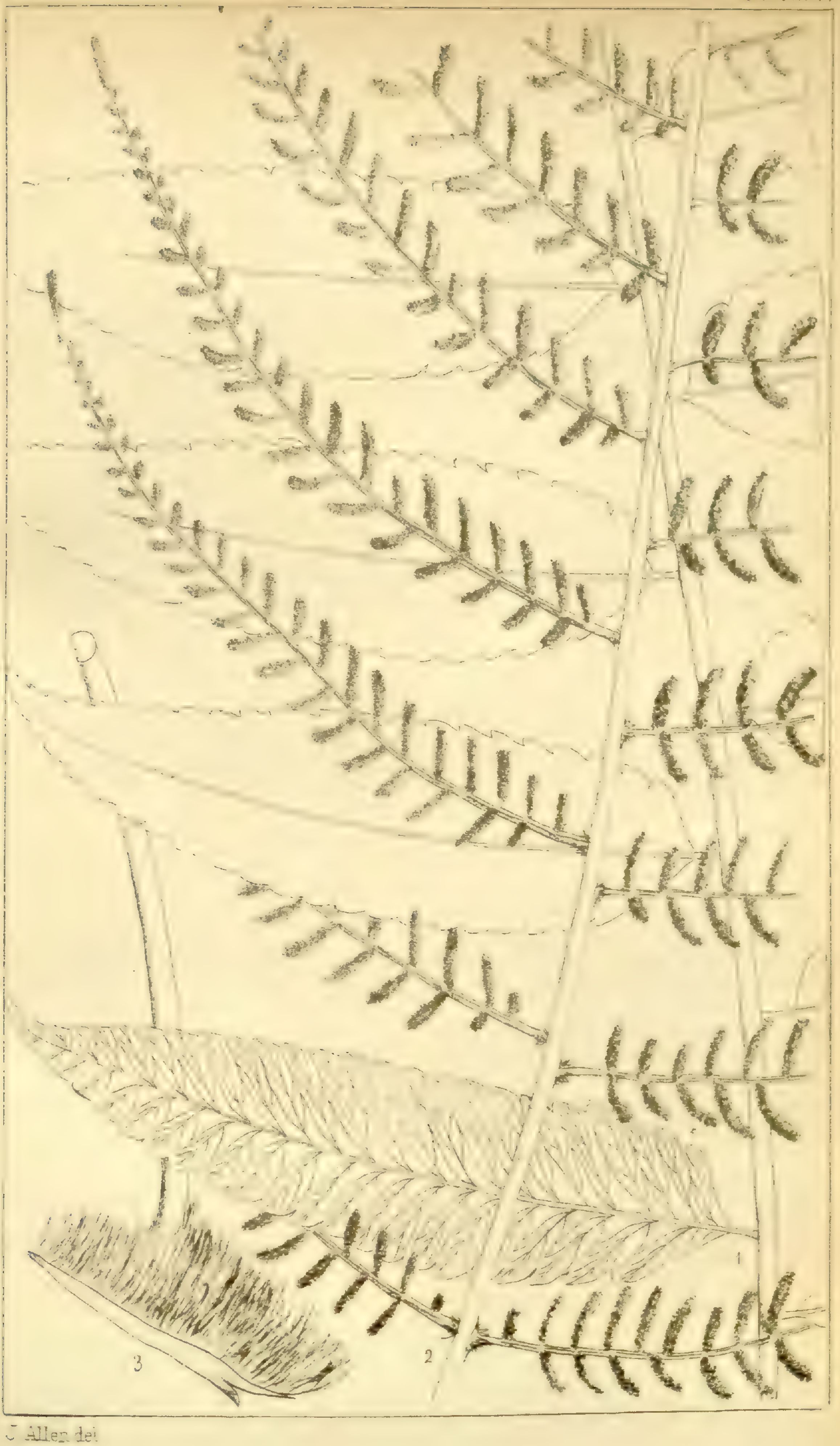
Acrostichum (Gymnopteris) polybotryoides, *Baker in Journ. Bot.* 1881, p. 207; rhizomate lignoso stramineo scandente paleis magnis membranaceis ferrugineis linearibus patulis dense vestito, stipitibus strictis nudis stramineis, frondibus sterilibus oblongo-lanceolatis simpliciter pinnatis firmulis glabris viridibus, rachi nuda straminea, pinnis multijugis lanceolatis sessilibus vel breviter petiolatis lobatis basi postice cuneato-truncatis, infimis haud reductis, lobis rotundatis, venis primariis rectis parallelis erecto-patentibus, venulis paucijugis ascendentibus inferioribus apice anastomosantibus, frondibus fertilibus bipinnatis, pinnis lanceolatis, pinnulis oblongo-cylindricis segregatis basi adnatis.

Hab. New Granada; mountain forests of the province of Ocana, alt. 7000 ft., *Kalbreyer*, 1254.

Stipites 5–8 poll longi. *Lamina sterilis* sesquipedalis vel bipedalis, pinnis 10–12 lin. latis.

Discovered by Mr. Kalbreyer in 1879 whilst travelling on behalf of Messrs. Veitch.—J. G. Baker.

Fig. 1. Portion of sterile frond. 2. Portion of fertile frond. 3. Base of stipe and portion of rhizome: *all life size.*



J. Allen del.

Acrostichum polybotryoides, Baker.

Plate 1691.

ACROSTICHUM JUGLANDIFOLIUM, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Acrosticheæ.

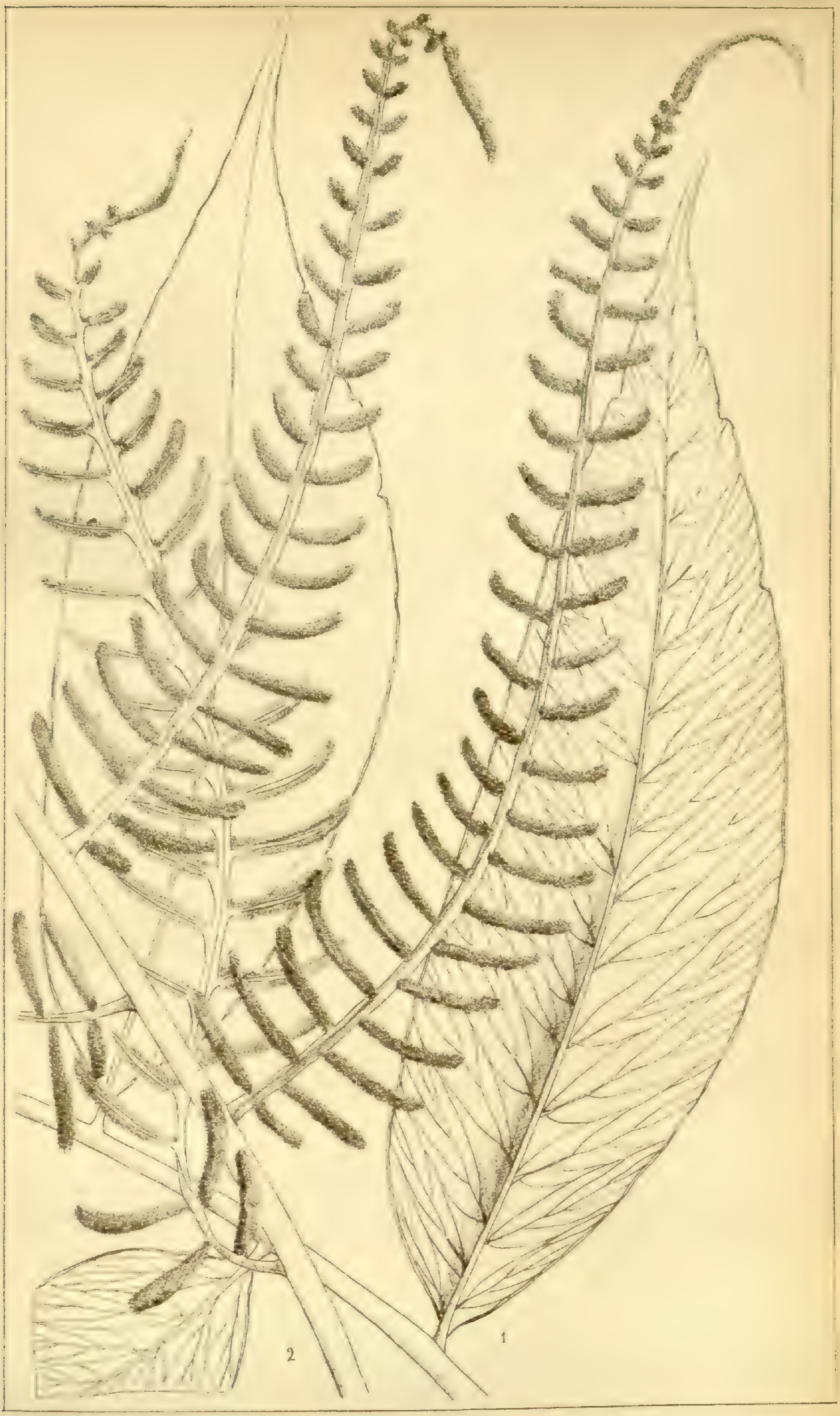
Acrostichum (Gymnopteris) juglandifolium, *Baker in Journ. Bot.* 1881, p. 207; rhizomate lignoso scandente, stipitibus elongatis nudis stramineis, frondibus sterilibus magnis oblongo-lanceolatis simpliciter pinnatis subcoriaceis glabris viridibus, rachi nuda straminea, pinnis multijugis alternis oblongo-lanceolatis integris acuminatis sessilibus vel breviter petiolatis deorsum postice angustioribus, infimis haud reductis, venis parallelis erecto-patentibus rectis, venulis paucis simplicibus ascendentibus, inferioribus apice anastomosantibus, frondibus fertilibus bipinnatis, pinnis lanceolatis, pinnulis segregatis adnatis cylindricis.

Hab. New Granada; forests of the province of Antioquia, on trees, alt. 4000–5000 ft., *Kalbreyer* 1778.

Stipites pedales. *Lamina sterilis* bipedalis, pinnis 15–18 lin. latis.

This also was discovered by Mr. Kalbreyer on his expedition of 1880.

Fig. 1. Portion of sterile frond. 2. Portion of fertile frond: *both life size.*



J Allen del

Acrostichum juglandifolium, Baker.

Plate 1692.

ACROSTICHUM SUBERECTUM, *Baker.*

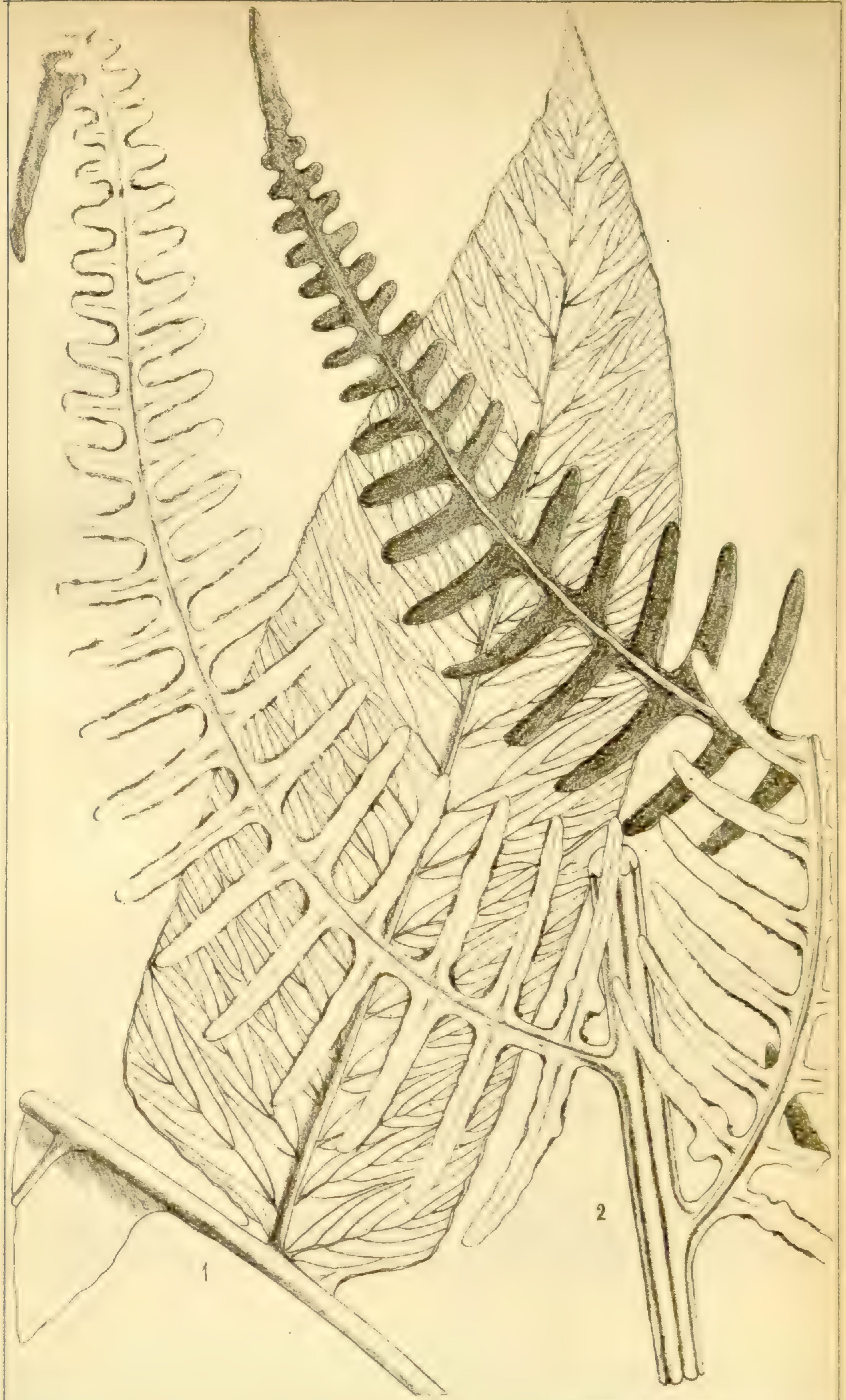
Filices, Sub-order Polypodiaceæ, Tribe Acrosticheæ.

Acrostichum (Gymnopteris) suberectum, *Baker in Journ. Bot.* 1881, p. 207; rhizomate lignoso scandente, stipitibus elongatis nudis, frondibus sterilibus oblongo-lanceolatis subcoriaceis glabris viridibus apice pinnatis, deorsum simpliciter pinnatis, rachi nuda straminea, pinnis multijugis oblongo-lanceolatis acuminatis, superioribus integris basi adnatis, inferioribus brevissime petiolatis deorsum breviter lobatis, venis erecto-patentibus rectis parallelis, venulis 5–6-jugis ascendentibus simplicibus, inferioribus apice anastomosantibus, frondibus fertilibus pinnatifidis, pinnis lanceolatis, pinnulis linearibus basi late adnatis.

Hab. New Granada; forests of the province of Antioquia, alt. 4000–5000 ft., *Kalbreyer*, 1877.

Lamina sterilis 4–5-pedalis, pinnis $2\frac{1}{2}$–3 poll. latis.
A very fine plant, also discovered by Mr. Kalbreyer.—J. G. Baker.

Fig. 1. Portion of sterile frond. 2. Portion of fertile frond: *both life size.*



J. Allen. del.

Acrostichum suberectum, Baker.

Plate 1693.

ACROSTICHUM GILLEANUM, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Acrosticheæ.

Acrostichum (Chrysodium) Gilleanum, *Baker in Journ. Bot.* 1882, p. 310; caudice erecto, frondibus sterilibus pluribus cæspitosis sessilibus subcoriaceis oblanceolato-oblongis obtusis e medio ad basin sensim angustatis, facie viridibus parce paleaceis, dorso paleis lanceolatis ciliatis membranaceis pallide ferrugineis imbricatis dense persistenter vestitis, venulis immersis occultis copiose anastomosantibus, frondibus fertilibus bifidis vel trifidis longe petiolatis, segmentis lanceolatis, **paleis cum sporangiis intermixtis.**

Hab. Brazil; woods near Arassnahy, province of Minas Geraes, *Glaziou*, 13341.

Lamina sterilis 3 poll. longa, supra medium 8–9 lin. lata. *Laminæ fertilis* segmenta 2–3 poll. longa; stipites 9–10-pollicares.

This very distinct species was discovered in 1881 by M. Gille, an old collector of Dr. Glaziou's, and named after him at the request of the latter. Its only near ally is *A. aureonitens*, Hook., of the Galapagos islands.—J. G. Baker.

Fig. 1. Tuft of fronds. 2. Fertile frond: *both life size.* 3. Portion of fertile frond. 4, 5. Paleæ: *both enlarged.*

J.Allen del.

Acrostichum Gillianum, Baker.

Plate 1694.

ACROSTICHUM THOMSONI, *Baker.*

Filices, Sub-order Polypodiaceæ, Tribe Acrosticheæ.

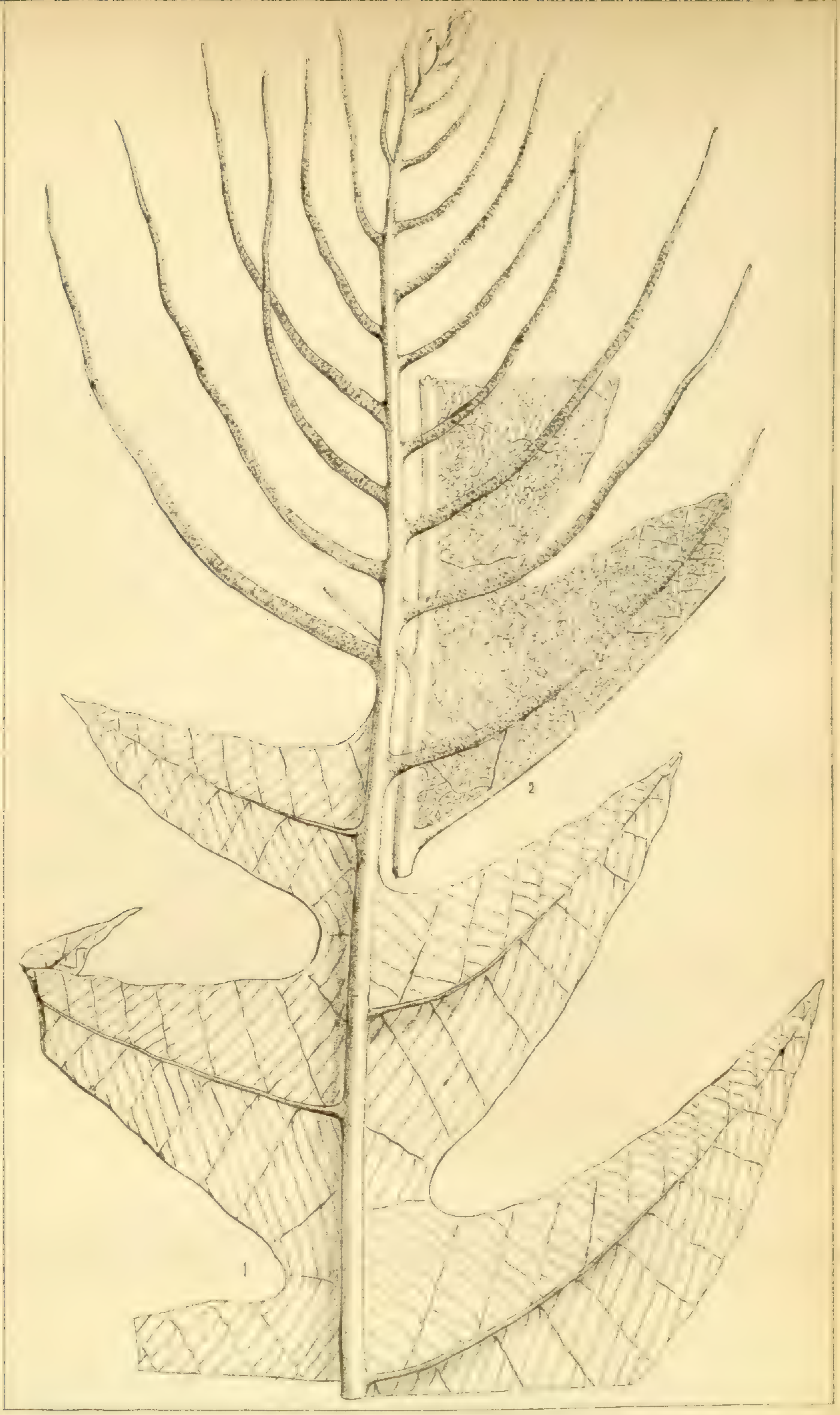
Acrostichum (Photinopteris) Thomsoni, *Baker in Journ. Linn. Soc.* vol. xv. p. 111; frondibus sessilibus oblongo-lanceolatis elongatis deorsum sterilibus membranaceis obscure pilosis profunde pinnatifidis, segmentis multijugis ovato-lanceolatis ascendentibus inferioribus brevioribus latioribus, venis primariis e costa ad marginem productis parallelis, secundariis rectis transversalibus parallelis, reliquis in areolis venulis inclusis liberis furcatis anastomosantibus, frondibus apice fertilibus pinnatis, pinnis multijugis linearibus.—*Hemsley in Bot. Challenger Expedit. Rep. Admiral. Isles*, p. 256.

Hab. Admiralty Islands, *Moseley*.

Lamina 2–3-pedalis, medio 5–6 poll. lata.

This is one of the most curious of the new ferns which were discovered by the Challenger Expedition. It belongs to a well-marked subgenus, of which only two species were previously known. It is named after Sir Wyville Thomson.—J. G. Baker.

Fig. 1. Upper part of frond. 2. Two sterile segments: *both life size.*



J. Allen del.

Acrostichum Thomsoni, Baker

Plate 1695.

PLATYCERIUM ELLISII, *Baker*.

Filices, Sub-order Polypodiaceæ, Tribe Acrostichæ.

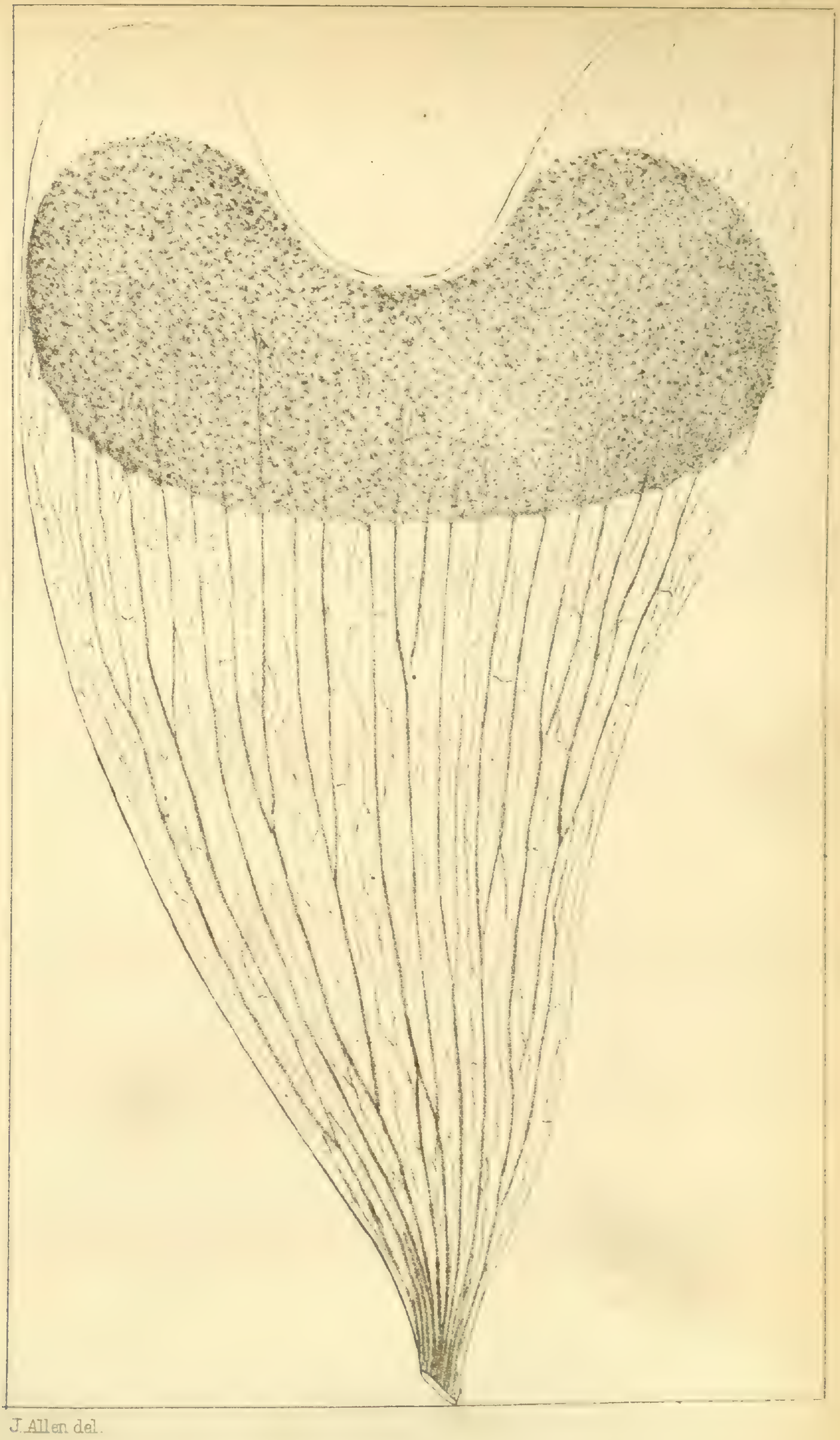
Platycerium Ellisii, *Baker in Journ. Linn. Soc.* vol. xv. p. 421; frondibus sterilibus ignotis, fertilibus sessilibus rigidulis glabris viridibus cuneatis, apice emarginatis sinu late aperto, venis primariis flabellatim subparallelis verticalibus valde exsculptis intermediis subtilioribus obliquis connexis, soro magno transversali oblongo emarginato ad furcarum apices haud attingente.

Hab. Forests of Central Madagascar, *Rev. W. Ellis*.

Lamina pedalis vel sesquipedalis, infra apicem 5–6 poll. lata.

This very curious species was received from the veteran missionary after whom it is named in the year 1870. Another allied species is also peculiar to the island (*P. madagascariense*, Baker).—J. G. Baker.

Whole frond: *reduced in size.*



J. Allen del.

Platycerium Ellisii, Baker.

Plate 1696.

MOHRIA VESTITA, *Baker.*

Filices, Sub-order Schizæaceæ.

Mohria vestita, *Baker* (*sp. nov.*); caudice erecto, stipitibus brevibus dense paleaceis, frondibus parvis oblongo-lanceolatis bipinnatis utrinque viridibus paleis lanceolatis vel linearibus membranaceis pallide brunneis crinitis, rachi dense paleacea, pinnis multijugis sessilibus ovato-oblongis, infimis haud reductis, pinnulis paucijugis contiguis rotundatis adnatis inciso-crenatis.

Hab. Crevices of rocks on Mount Kilimanjaro, alt. 6000 ft., *H. H. Johnston.*

Stipites 9-12 lin. longi. *Lamina* 3–4-pollicaris, medio 15–16 lin. lata.

This is one of the new ferns found on the recent Kilimanjaro expedition. It differs from the Cape *M. caffrorum*, Desv. principally by its paleaceous indumentum.—J. G. Baker.

Fig. 1. Whole plant: *life size.* 2. Sterile segment. 3. Fertile segment: *enlarged.*

J.Allen del.

Mohria vestita, Baker.

Plate 1697.

TODEA MOOREI, *Baker.*

Filices, Sub-order Osmundaceæ.

Todea (Leptopteris) Moorei, *Baker in Journ. Bot.* 1873, p. 16: caudice subarborescente, stipitibus brevibus, frondibus oblongo-deltoideis tripinnatis atroviridibus glabris membranaceis siccitate nigrescentibus, pinnis oblongo-lanceolatis multijugis imbricatis, pinnulis lanceolatis multijugis sessilibus imbricatis, segmentis tertiariis contignis erecto-patentibus, superioribus ligulatis integris uninerviis, inferioribus latioribus apice dentatis, venis furcatis, soris costalibus, sporangiis paucis.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 524; *Benth. Fl. Austral.* vol. vii. p. 700.

Hab. Lord Howe's Island; summit of Mount Gower, *C. Moore, Fitzgerald.*

Lamina 3–4-pedalis. *Pinnæ centrales* semipedales. *Caudex* pedalis vel sesquipedalis.

This is one of the most interesting of the many new ferns discovered during the recent exploration of Lord Howe's Island, which lies seven or eight degrees east of New South Wales in S. lat. 32°.—J. G. Baker.

Fig. 1. Portion of frond: *life size.* 2. Fertile pinnule. 3. Portion of fertile pinnule, with one basal sorus. 4. Sporange: *all more or less enlarged.*

2

4

3

J. Allen del.

Todea Moorei, Baker.

Plate 1698.

LYGODIUM KERSTENII, *Kuhn.*

Filices, Sub-order Schizæaceæ.

Lygodium Kerstenii, *Kuhn, Fil. Afric.* pp. 28, 169 ; longe volubilis, frondibus membranaceis parce pilosis, rachibus stramineis, pinnis oblongo-lanceolatis, pinnulis multijugis profunde pinnatifidis inferioribus deltoideis breviter petiolatis, petiolo inarticulato, segmentis superioribus erecto-patentibus ovatis vel lanceolatis, infimis maximis inæquilateralibus postice productis profunde lobatis, venis in segmentis tertiariis pinnatis venulis ascendentibus furcatis, spicis terminalibus elongatis, bracteis late ovatis navicularibus imbricatis.—*Bot. Von der Decken, Reise*, p. 58, tab. 2.

Lygodium subalatum, *Bojer* ; *Hook. et Baker, Syn. Fil.* p. 438.

Hab. Comoro Islands, *Bojer, Speke, Kirk, Bewsher* ; Madagascar, *Boivin, Kersten, Hildebrandt* ; Mombas, *Von der Decken.*

Pinnæ 6–9 poll. longæ. *Spicæ* 1–2 lin. longæ.

This very distinct East African species is intermediate between *L. pinnatifidum* and the rare Malayan *L. polystachyum*, Wall.—J. G. Baker.

Fig. 1. Pinna. 2. Pinnule : *both life size.* 3, 4. Two spikes. 5. A single sporange : *more or less enlarged.*

J.Aller. del.

Lygodium Kerstenii, Kuhn.

Plate 1699.

DANÆA SERRULATA, *Baker.*

Filices, Sub-order Marattiaceæ.

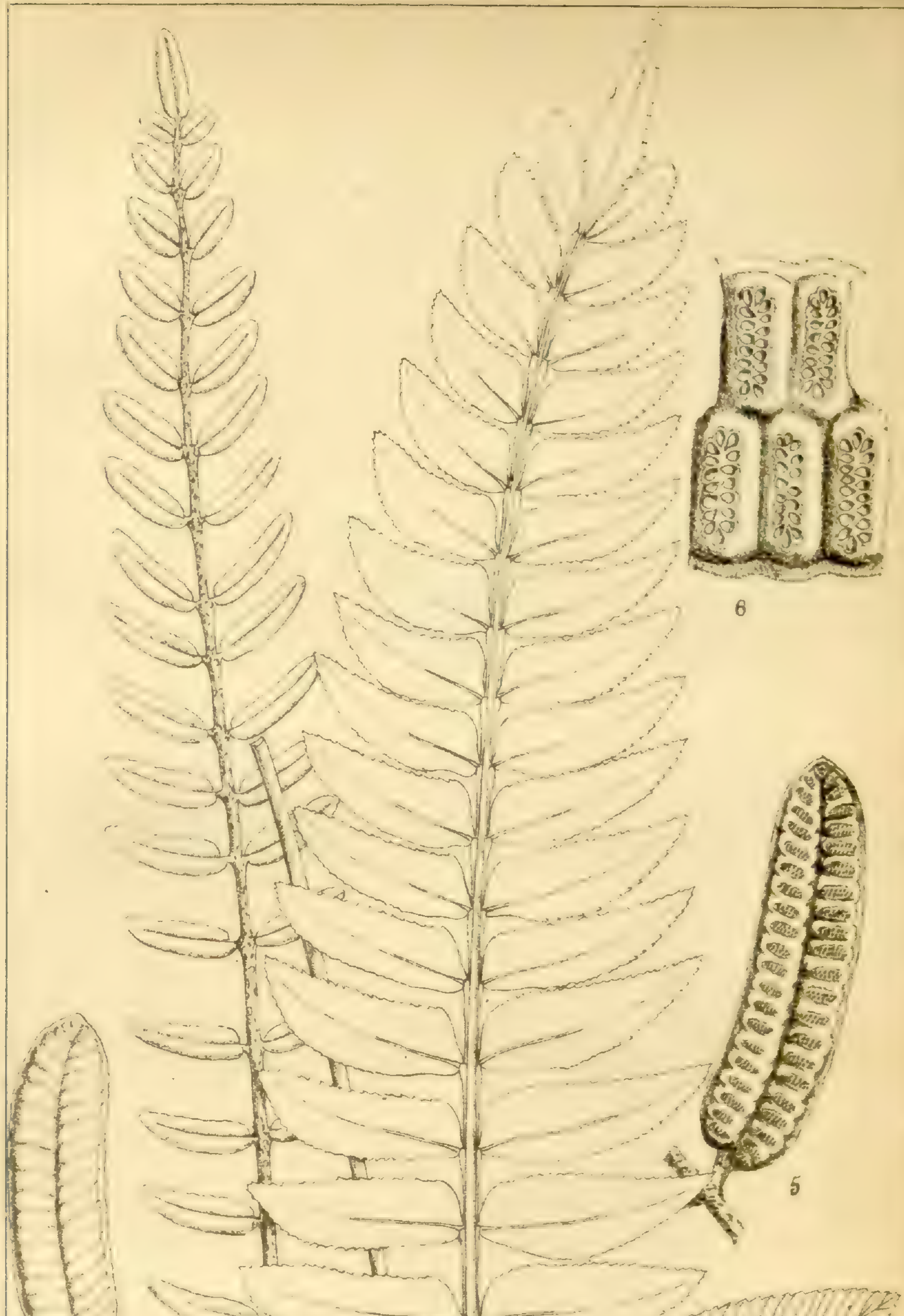
Danæa serrulata, *Baker in Journ. Bot.* 1881, p. 208; caudice erecto, stipitibus brevibus nodoso-articulatis, frondibus sterilibus oblongo-lanceolatis simpliciter pinnatis firmulis glabris utrinque viridibus, rachi anguste alata, pinnis sessilibus multijugis oppositis inæquilateraliter oblongo-lanceolatis serrulatis subacutis deorsum antice productis, infimis subreductis, frondibus fertilibus lanceolatis, pinnis petiolatis lineari-oblongis obtusis.

Hab. New Granada; forests of the province of Antioquia, alt. 4000–5000 ft., *Kalbreyer.*

Lamina sterilis 6–9-pollicaris, medio 2 poll. lata, pinnis 3–4 lin. latis. *Lamina fertilis* 12–15 lin. lata.

This is another of Mr. Kalbreyer's discoveries, communicated to us by Messrs. Veitch. It is allied to *D. trichomanoides*, Spruce, and *D. humilis*, Moore, differing by its firmer texture and distinctly serrulate pinnæ.—J. G. Baker.

Fig. 1. Sterile frond: *life size.* 2. A sterile pinna: *enlarged*, showing venation. 3. Fertile frond: *life size.* 4, 5. Fertile pinnæ: *enlarged.* 6. Portion of fertile pinna: *more enlarged.*



J Allen del.

Danæa serrulata, Baker.

PLATE 1700.

DANÆA CRISPA, *Reichb. fil. et Endres.*

FILICES, Sub-order MARATTIACEÆ.

Danæa crispa, *Reich. fil. et Endres in Bot. Zeit.* 1872, p. 489; caudice erecto, stipitibus brevibus, frondibus sterilibus oblongis simpliciter pinnatis membranaceis saturate viridibus, rachi alata dense rugoso-paleacea, pinnis 15–20-jugis subsessilibus ligulatis obtusis crispatis argute serrato pinnatifidis, inferioribus sensim minoribus, frondibus fertilibus pinnis lanceolatis integris distincte stipitatis.—*Hook. et Baker, Syn. Fil.* edit. 2, p. 525.

HAB. Forests of Costa Rica, *Endres.*

Lamina sterilis semipedalis, medio $2\frac{1}{2}$–3 poll. lata, pinnis 3–4 lin. latis. *Pinnæ fertiles* 12–15 lin. longæ, 2 lin. latæ.

For a specimen of this very remarkable novelty we are indebted to Prof. Reichenbach. The end segment is suppressed, but that is doubtless only accidental.—J. G. BAKER.

Fig. 1. Sterile frond: *life size.* 2. Sterile pinna: *enlarged.* 3. Portion of fertile frond: *life size.* Portion of fertile pinna: *enlarged.*

J. Allen del.

Danæa crispa, Reich, fil. et Endres.

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Lygodium Kerstenii, *Kuhn*	1698
—— *subalatum*, Bojer.	1698
Mohria vestita, *Baker*	1696
Nephrodium Bakeri, *Harringt.*	1664
—— Buchanani, *Baker*	1662
—— Dickinsii, *Baker*	1659
—— *eximium*, Cordemoy inedit.	1662
—— hederæfolium, *Baker*	1665
—— longicaule, *Baker*	1658
—— magnum, *Baker*	1663
—— Prenticei, *Baker*	1661
—— subcrenulatum, *Baker*	1660
—— tripartitum, *Baker*	1666
Nephrolepis abrupta, Mett.	1604
Notochlæna Balansæ, *Baker*	1677
—— *candida*, var. *quinquefido-palmata*, *Hook.*	1679
—— chinensis, *Baker*	1676
—— Hookeri, *Eaton*	1679
—— Palmeri, *Baker*	1678
Pellæa Kitchingii, *Baker*	1639
—— Pearcei, *Baker*	1638
Pinonia splendens, Gaudich.	1603
Platycerium Ellisii, *Baker*	1695
Polypodium cantoniense, Baker	1685
—— Eggersii, *Baker*	1671
—— *faucium*, Liebm.	1669
—— Krameri, *Franch. et Sav.*	1668
—— macrochasmum, *Baker*	1675
—— Maximowiczii, *Baker*	1667
—— *muscicola*, Cordemoy MSS.	1673
—— Novæ-zealandiæ, *Baker*	1674
—— obliteratum, *Swartz*	1669
—— *oyamense*, *Baker*	1668
—— pozuzoense, *Baker*	1672
—— *subserratum*, Hook. et Baker	1650
—— Tatei, *Baker*	1670
—— torulosum, *Baker*	1673
Polystichum Pearcei, Philippi	1657
Pteris decomposita, *Baker*	1641
—— dominicensis, *Baker*	1642
—— phanerophlebia, *Baker*	1640
Ptilopteris Maximowiczii, Hance	1667
Schizopteris Lidgatii, Hilleb. MSS.	1635
Scolopendrium Balansæ, *Baker*	1653
—— *pinnatum*, J. Sm.	1652
Stromatopteris moniliformis, Mett.	1601
Tænitis niphoboloides, Luerssen.	1686
Todea Moorei, *Baker*	1697
Trichomanes Armstrongii, Baker	1614
—— brachyblastos, *Mett.*	1618
—— hispidulum, *Mett.*	1619
—— Kalbreyeri, *Baker*	1617
—— Lyallii, *Hook. et Baker*	1616
—— Powellii, *Baker*	1615
Triphlebia pinnata, *Baker*	1652
Woodsia lanosa, Hook. et Baker	1680